PRINTING EQUIPMENT ENGINEER

JANUARY • 1935

A TECHNICAL PUBLICATION FOR MECHANICAL EXECUTIVES RESPONSIBLE FOR PRINTING PRODUCTION, EQUIPMENT AND SUPPLIES IN THE COMMERCIAL, MAGAZINE, PRIVATE PLANT AND DAILY NEWSPAPER FIELDS

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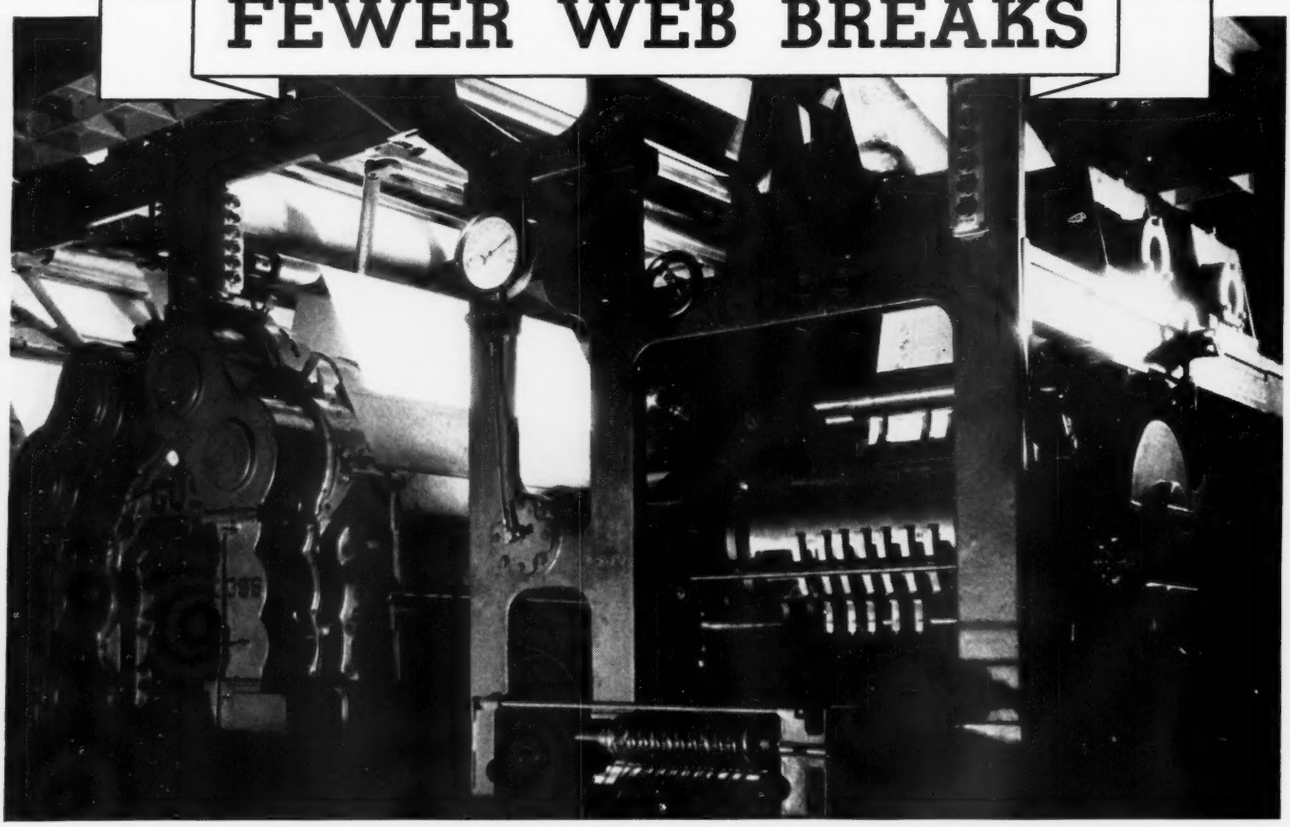

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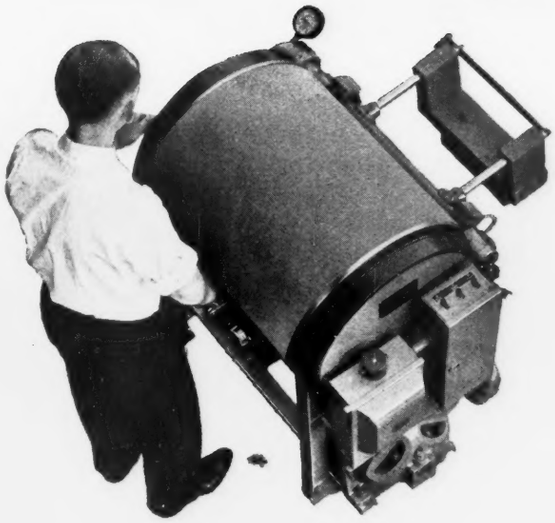

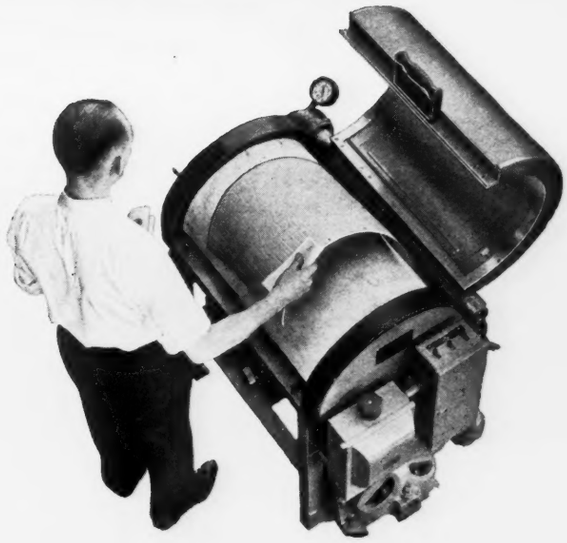

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Volume 49 — *Number 4*

January 1935 Contents

PAGE

CYLINDER PRESS SLURS - - - - - - - - - - - 7
Robert F. Salade

LABELS FOR NICKEL ARTICLES - - - - - - - - - - 9
Printing Industry Research Assn.

AUTOMATIC PROOF CONVEYOR - - - - - - - - - 10
E. G. Myers

LIMIT SWITCH FOR MOTION CONTROL - - - - - - - - 11
Staff Writer

ROLLERS FROM SYNTHETIC RESINS - - - - - - - - 20
A. L. Freedlander

MATRIX DETECTOR SIGNALS OPERATOR - - - - - - - - 30
Patents for the Month

EQUIPMENT AND TECHNICAL LITERATURE - - - - - - - 36

ADVERTISERS' INDEX - - - - - - - - - - - - 38

A Technical Publication for Mechanical Executives Responsible for Printing Production, Equipment and Supplies in the Commercial, Magazine, Private Plant and Daily Newspaper Fields.

Published by
DON WILL

Edited by
MAC SINCLAIR

ESTABLISHED 1910

PUBLISHED MONTHLY
AT
1370 ONTARIO STREET
CLEVELAND · OHIO

CCA
Member Controlled Circulation Audit

Eastern Representative: Russell Birchfield, 509 Fifth Ave., New York, N. Y. Phone: VAnderbilt 3-3958

Western Representative: H. D. Aylsworth, 121 North Clark St., Chicago, Ill. Phone: State 3800.

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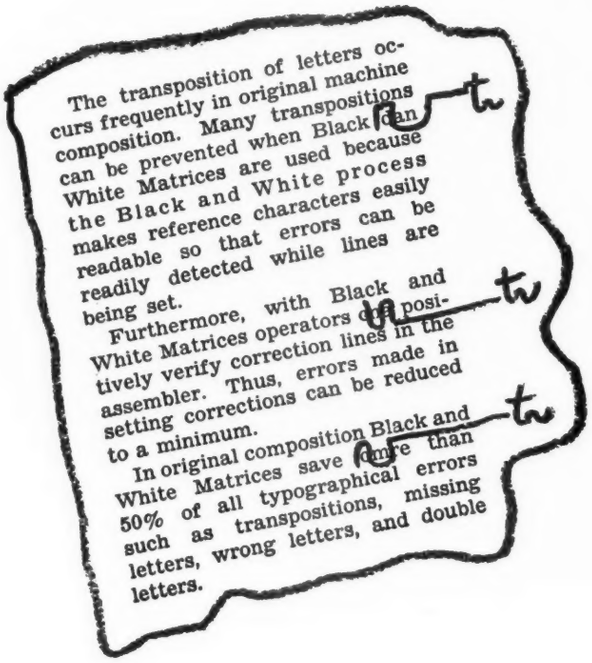
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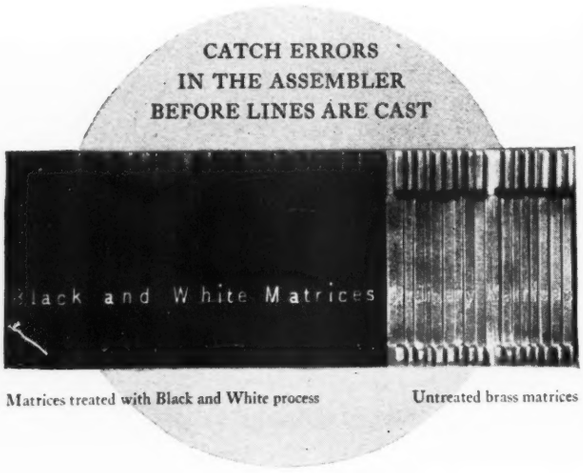

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Printing
EQUIPMENT
Engineer

for January, 1935

Cylinder Press Slurs

By ROBERT F. SALADE

THERE are so many different causes for slur in printing from type-forms or plates on flat-bed cylinder presses that it is necessary for every pressman to know all the principal causes, in order that he may check any one of them when trouble with presswork occurs. Among the distinct causes of slur in printing on a flat-bed cylinder press are those listed as follows:

An over-packed impression cylinder.

Cylinder bearers not running in close contact with the bed bearers.

Electrotype plates mounted on ordinary wood base which has become warped.

Form roller not in correct contact with vibrators.

Badly worn and loose roller sockets.

Poor justification and make-up of type matter with blocked plates.

Too much paste on overlays or patch sheets in the makeready.

Press or bed bearers and cylinder bearers unevenly worn.

Electrotype plates attached to a plate-mounting system which, through an over-tight lock-up, in a chase or on the press-bed, has become warped or not uniformly level.

An iron chase badly sprung out of proper shape on account of over-tight lock-up.

A loose register rack or segment.

Type matter and blocked printing plates imposed and locked up in a chase with imperfect wood, lead or iron furniture and quoins, thus causing spring or "raising" of the form.

A soft, spongy packing with a loose or wrinkled top-sheet.

A form locked too rigidly with the press bed clamps, causing the form to spring or warp.

Failure to reduce the amount of normal packing, below the cylinder bearers, to provide for the printing of thick paper stock or cardboard.

A warped or cracked sheet of pressboard under the packing.

Carelessly applied overlays or other makeready to the gripper edge of the packing.

Varying heights or thicknesses of makeready interlays placed between printing plates and bases.

Printing plates mounted on ordinary wood blocks which (the blocks) are not quite square or vertically true on all sides.

A form too large or too heavy for the press on which it has been placed.

Printing plates of any kind mounted on wood base so high that the base makes the plates above the standard type-high (0.918 in.) point.

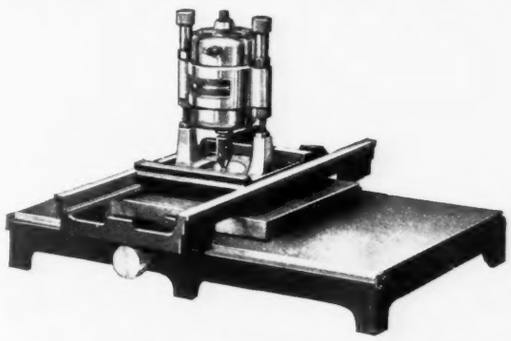
A form set too close to the front edge of the press bed.

Printing plates which have not been tightly attached to a plate-mounting system, so that they are apt to move slightly when printed impressions are taken.

Printing plates of any kind which have not been finished with a level printing surface.

Printing plates of several different heights which have been placed on one large plate-mounting system, in which case, some of the plates will stand higher than others.

In many instances of printing from plates on a flat-bed cylinder press, a slur may occur in the printing at the edges of the plates, and frequently this trouble is attributed mistakenly to defective plates. When checking up to learn the exact cause of a serious slur, the pressman should study carefully the different causes for slur outlined in this article. Considering the scientific methods by which both original



Challenge Portable Router and Type-High Unit. The Router may be taken from its base and can be plugged in near a form or printing press to remove or deepen open spaces in cuts and spacing material while the form is on the press.

printing plates and electrotypes are made and finished today, it is safe to say that slur in printing from such plates is seldom due to the plates themselves. Old and worn plates, however, may often cause trouble in good presswork.

Printing plates of any kind, large or small, which have been mounted too high on wood base, can be made exactly type-high on either a power type-high planing machine or on a hand-operated combination shute-board and type-high machine. On either style of machine, the back or bottom surface of the wood base is planed until the mounted plate stands type-high. On a combination shute-board and type-high machine, the sides of a wood-blocked plate can also be planed square and accurate vertically. The sides of both wood-blocked and solid lead-blocked printing plates can also be squared true on a modern make of power saw-trimmer. Because of its remarkable utility, due mention is made of the combination type-high unit. This complete unit consists of a portable router, a type-high machine and a vise for both type-high plates and unmounted electrotype plates of 11-point height. The portable router unit, of which there are at least two good makes, can be operated by cord attachment from any electric lamp socket and can be moved about the plant easily to any desired place for work—even to the surface of a form on the bed of a cylinder press, for routing out dead metal from printing plates or "high" blank areas from machine composition forms, line engravings or stereotype plates.

Not infrequently, defective printing is ascribed to quality of printing plates, when as a matter of fact, the trouble may be due entirely to dust or lint on the surface of the paper stock being run through the press. An important aid to excellent printing from original plates or electrotypes of the plates is a press brush attached to a press in such a manner that each sheet of paper stock is automatically cleaned of dust and paper lint, before being printed. This simple cleaning process plays an important part in producing the finest printing on all grades of paper stock adaptable to single-color halftone printing, halftone process color printing, multi-color work and printing solid tints. Press brushes are now available for use on all makes and styles of flat-bed cylinder printing presses, rotary presses and automatic job cylinder presses. These brushes are inexpensive and can be installed easily.

There are many different causes for offset in letterpress printing, several of which are mentioned as follows:

A type of printing ink not suited to the particular kind of paper stock being run.

Static electricity.

An unnecessary heavy film of color.

An insufficient amount of impression on solid areas of the form, a condition which may cause the pressman to cover the form with an over-supply of ink.

The temperature of the pressroom may be too cold.

Too much impression from a form of type or plates is apt to cause offset on account of the raised portions on back of the printed sheets sliding over the wet printed surface of previously delivered sheets on a pile.

Hard form rollers may cause offset as they do not distribute the ink quite evenly over the surface of the form.

The normal temperature of a pressroom should be 70 degrees F.

Left-Hand Perforating

By L. Jas. Whiteman*

The natural way to feed paper into printing plant machines is with our right hand to a guide on the left. Some hand-operated perforators, however, are made with the side guide and the hand-operating lever at the right. If the operator fed the sheets with his left hand it would be the convenient way to operate the lever with his right hand, but, as the average worker is right-handed, the easy way would be to feed the sheets with the right hand to a guide on the left, operating the lever with the left hand. Pulling the lever down and letting it back up requires no skill—the obvious work for the awkward left hand—but handling the paper and inserting the sheets into the perforator and keeping them in proper position while being perforated does require some deft handling.

On a hand perforator, the pins are set to perforate ¼ in. from the front of the plates or dies, making a 1¾ in. space at the back—the minimum distance that can be perforated from the margin by using the regular back guides. About ninety per cent of the perforating done is within ¾ in. of the margin. A pair of little spring gadgets is provided to be attached to the regular guide and slipped between the metal plates and used as a guide for close margin perforating. In some cases the gadgets break or are misplaced, so the old cardboard system is resorted to, with its inconvenience and trouble of sheets slipping over or under.

One printer turned the perforator around so that he could feed from the rear after making a few simple alterations. Change the rear guide to the front (which is now the back) feed board, and set the side guide at the side most convenient for operating. With the perforator turned around, the lever will be at the left. Set the handle in a convenient position (the handle is usually set on a shaft by a set screw). The biggest part of the alteration is making a V-shaped groove as an easy entrance for the paper between the two plates. If a machine shop is convenient, this groove can be milled easily; otherwise take the perforator down and file the edges (particularly the upper) so that there is an easy sloping entrance for the paper, similar to the way the front edge is milled.

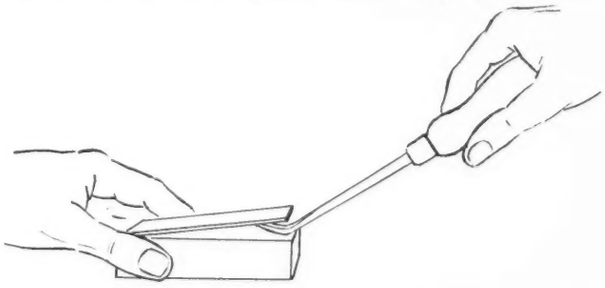
*Clovis, New Mexico.

Cut Lifter

By Mort Moeder*

Some few months ago, with the introduction of a locally manufactured cut-fastening cement, a problem arose in the *Plain Dealer* composing room. In other words, by adopting the use of the cut cement we abolished one problem but immediately encountered a smaller one—that of finding some way to separate cuts from bases when breaking up the forms each day.

Skinned knuckles and bad tempers came into play through the use of makeup rules and pocket knives to separate cuts from bases. The best tool for the purpose, we have found, can be made from a short screwdriver of medium width which can be purchased for 10c each. Heat the screwdriver blade to a cherry red and bend the blade to a 45 deg. angle about 1 in. back from the point. Heat again to a cherry red and plunge in water. Brighten the blade with abrasive cloth and draw the temper before a gas flame until the steel turns a straw color. Then grind the top of the screwdriver blade to a fairly sharp edge. Drawing the temper after hardening removes the brittle temper from the blade so that when prying up cuts it will not break.



*Superintendent Composing Room, Cleveland *Plain Dealer*.

Fogging of Nickel Articles

Caused by Printed Labels — Precautions Which Should be Taken In the Selection of Raw Label Materials

SUMMARY:

Labels which were printed with a black ink on a glassine paper had caused the fogging of nickel-plated articles to which they were attached. The fogging is due to the formation of a basic nickel sulphate caused mainly by the catalytic oxidation of sulphur dioxide at the nickel surface. The glassine paper contained a trace of sulphur dioxide and appreciable quantities of sulphates. In order to prevent fogging it was recommended that a thin film of lanoline should be applied to the nickel prior to attaching the label and that 0.1 per cent of ammonium sulphide be added to the solution used to damp the gum on the back of the label. Printed matter brought into contact with nickel articles should be as free from materials likely to give rise to sulphur dioxide as is feasible and should contain the minimum of sulphates, i. e., in the case of paper, it should have as low an acid value as possible.

It is not always sufficient to judge the suitability of printed matter solely on the quality of the reproduction; frequently the conditions under which it is to be used is an important factor in the selection of ink and paper, etc. No matter how perfect the print may be, according to the ordinary standards, if it affects or is affected by other materials with which it is brought into contact during use, it will be regarded as unsatisfactory, and unless such defects can be eliminated the use of print in that particular connection will cease with a consequent loss to the printing industry as a whole.

PROBLEM INVESTIGATED

SUCH a case was investigated recently by the P. I. R. A., in which printed matter had affected the appearance of nickel-plated articles. A member had printed some labels with black ink on a gummed glassine paper. The labels were attached to nickel goods which were then displayed for sale. On removing the labels it was found that the nickel beneath had a dull, creamy appearance except in those areas covered by the black print. Here the nickel was still comparatively bright so that in effect there was on the article a "photographic copy" of the label, which could not be removed by any ordinary cleaning process. This difficulty only arose with nickel articles; identical labels could be attached to similar cromium-plated articles, without harmful effect.

Samples of the labels, glassine paper, gum, ink, and the nickel-plated articles were available for examination, and it was stated that, in order to secure satisfactory adhesion of the labels, the gum on the back was moistened with a ten per cent solution of glycerin in water.

"FOGGING" OF NICKEL

CAUSES: The dull, creamy appearance of the discolored nickel suggested "fogging," a subject which has been investigated by W. H. J. Vernon. Bright nickel surfaces will, under certain conditions of exposure to the atmosphere, assume a dull-cream-colored film, which in the early stages can be readily removed by wiping with a cloth. On further exposure the film becomes more tenacious and can only be removed by abrading the nickel surface. This phenomenon has been described as "fogging," and is due to the formation of a basic nickel sulphate which arises partly from the presence of suspended sulphates in the air and partly (probably mainly) from the catalytic oxidation of sulphur dioxide at the nickel surface. In ordinary industrial atmospheres sulphur dioxide and suspended sulphates are present in small amounts, and if the nickel article is exposed under such conditions that the surrounding air is constantly changing the cumulative effect of the small quantities may be quite appreciable. That nickel will, at times, remain bright and unfogged is explained by the fact that the fogging reaction will only commence when the relative humidity of the atmosphere exceeds a certain critical value which is in the neighborhood of 70 per cent. In atmospheres which are drier than this nickel will remain bright almost indefinitely. This phenomenon occurs with nickel and copper-nickel alloys, the tendency to fogging being roughly proportional to the nickel content. Chromium, on the other hand, has a marked inhibitory effect, and nickel containing as little as 6 per cent of chromium is stated to be free from fogging tendencies. Another interesting fact concerning the fogging reaction is that it is accelerated by the action of light; Vernon found that the complete exclusion of light approximately halved the amount of film formed.

ANNOUNCEMENT

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PREVENTION: Methods available for the prevention of the fogging of nickel have also been examined. It was found that the pre-exposure of a nickel specimen to stagnant air materially reduced the rate of fogging and that a similar result was obtained by exposing the nickel to hydrogen sulphide of low concentrations. This effect is probably brought about by the "poisoning" of the nickel surface by an anti-catalyst, thus preventing the catalytic oxidation. It was also found that thin films of grease applied to the nickel surface effectively reduced the rate of fogging, lanoline being superior to vaseline in this respect.

EFFECT OF LABEL ON "FOGGING"

From these data it was possible to account for the discoloration of the nickel-plated articles. In some respects conditions were extremely favorable for fogging to occur. First, the gum on the label was damped with a ten per cent solution of glycerin in water. It was necessary to use glycerin which is hygroscopic in order that the gum film would always

Continued on page 34

[*] Reprint of Bulletin issued by Printing Industry Research Association, London, England, October, 1934.

Proof Press Bed Galley Register Bar

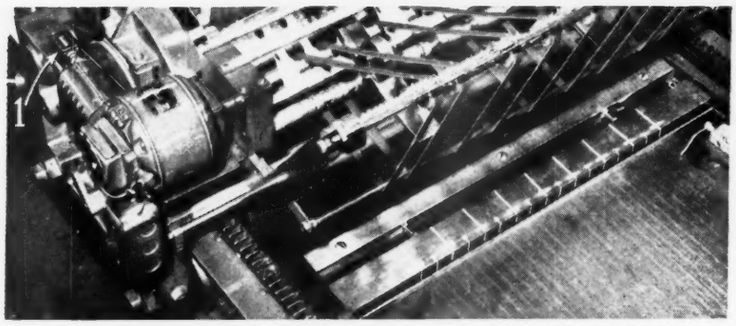
IN ORDER to provide a means of placing galleys on the bed of a Vandercook page-size power proof press in the proper position for register according to the width of the proof to be taken, Jas. M. Dent, chief composing room machinist of the Cleveland *News*, has devised a scale bar.

The bar is made from single-column stereotype base of suitable length to fit between the chase guide bars. The graduations representing column widths are scored in the base and are identified by figure stampings on either side of the scored lines.

As is shown in the illustration, the adjusting screws were shortened sufficiently to permit the front edge of the bar to coincide with the printing limit line.

Suitable graduations may be scored on the gripper or guide bar to enable the press operator to feed proof sheets of various widths according to the column width of the proof to be taken.

While the Vandercook page proof press is supplied with a totalizing counter to indicate the number of impressions taken, Mr. Dent procured a small Redington counter and applied it to the cylinder frame to the left of the large counter as shown at *1* in the illustration. The counter wheel shaft is fitted with an outside knurled knob, by means of which the counter can be set back to zero after each separate run of proofs has been finished. The counter is operated by a small lever, made from 1/16 in. stock, engaging the wheel shaft lever and the cylinder tripping frame. A small coil spring holds the lever in contact with the tripping frame.



View of galley register on bed of Vandercook Power Page Proof Press as applied by Jas. M. Dent, chief composing room machinist of the Cleveland News.

Automatic Proof Conveyor

By E. G. MYERS

IN A recent rearrangement of the New Orleans *Times-Picayune* Publishing Company's Composing room, it was necessary to relocate the proof room one story up. Frederick K. Forstall, mechanical superintendent, desired to provide an automatic means for carrying proofs and copy to and from the composing room, since no traffic was to be permitted between the two departments. For this purpose, George Downes, chief machinist, designed and built for Mr. Forstall a copy and proof carrying device which is unique for its simplicity.

The proof-carrying device represents the best in transmissions commonly used in Western Union offices for transmitting telegrams to the sending room. A tower of light structural steel was built in the composing room and one in the proof room. Spanning the two towers is a bridge, running almost along the ceiling. The tower in the composing room is adjacent the proof press. The proof boy take his first proof, slips it over the copy and drops it on the table at his right. A friction belt picks it up and conveys it noiselessly to the proof room where it is dropped automatically near the head proofreader who, without stirring from his desk, picks up the proofs and copy and deposits them on one of the turntable hexes. Likewise, all proofs return to him and he merely drops it on the return where it is taken automatically to a space beside the dumping bank in the composing room from which place it is carried by the proof boy to the machine for correction.

The carrying device is noiseless. All bearings are ball thrust and connections to the steel frame are made with

Continued on page 28

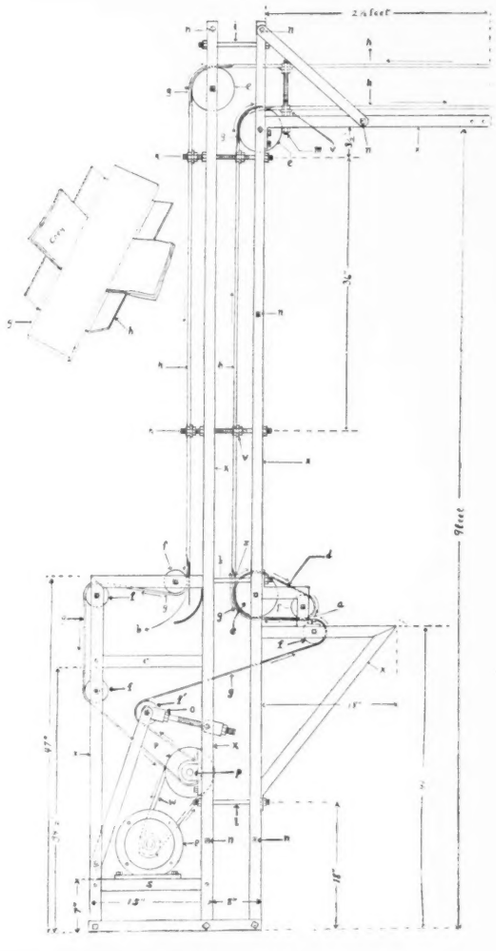


Diagram showing proofroom receiving and sending station and section of transmission, both of which are part of a copy-and-proof conveyor built for the Times-Picayune *and New Orleans* States *composing room by George E. Downes for Frederick Forstall, mechanical superintendent.*

The composing room receiving and sending station is similar with the exception of the belt-tightening idler pulley f *mounted in the adjustable arm* o *which is supported by a pair of braces. The conveyor belt is 130 ft. long, 2 in. wide, single ply, in one piece. The idler* f *can be adjusted to take up a two-foot slack in the belt.*

Copy and proofs are fed between the starting belts g *and* d *at* a. *After being conveyed around pulley* e *the copy and proofs are carried along between belt* g *and the pan* h *shown in the detail drawing at the left.*

On the return or delivery end of the conveyor, copy and proofs are dropped from belt g *and pan* h *at* b *into a receiving tray* c.

The conveyor belt is driven by a ½ h. p. Fairbanks-Morse motor, 1725 r.p.m. The motor is mounted on bracket s. *On the motor driving shaft are mounted two 2½-in. V-type pulleys. Two rubberized V-belts connect the motor to two 6-in. V-type driving pulleys mounted on counter shaft* p. *A 3-in. diam. by 2½-in. face pulley mounted on the same countershift* p *furnishes motive power for transmission belt* g.

HE SHARPENED IT FOR THE LAST TIME

1930 was a bad year for the Doe Printing Company. 1931 was worse. John Doe sharpened his pencil. By 1932 there was no more pencil to sharpen. He just couldn't meet competitive prices. He saw only one way to stay in business . . . that was to cut production costs. John Doe took a bold step. He re-equipped his plant throughout . . . put in modern presses . . . installed Linotypes in the composing-room.

Today he's making money. Not much, but enough to prove it can be done even under today's conditions. He does good work . . . does it fast . . . shows a small profit . . . discounts his bills.

You'd be surprised to know how many John Does there are around the country. They aren't doing much talking. We happen to know about quite a few of them because they are Linotype customers.

TRADE LINOTYPE MARK

Linotype Bodoni Family

MERGENTHALER LINOTYPE COMPANY

29 RYERSON STREET, BROOKLYN, NEW YORK

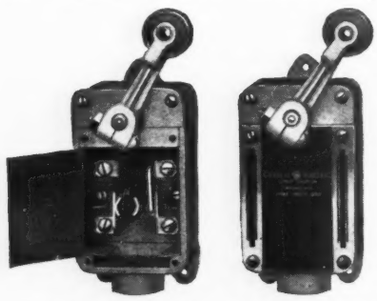
Limit Switch For Motion Control

Test Press, Supersurfacer, Saw Filer and Jointer, Italic Line-casting Matrices and Other Devices

By STAFF WRITER

New Small Track-Type Limit Switch

A small, track-type, spring-return limit switch, intended for use in making or breaking control or indicating circuits at a fixed point in the travel of a part of a machine or mechanism, has been introduced by the General Electric Company. Such an application is limiting the overtravel of the reversing table operation for stereotype matrix rollers. Other specific applications to printing machinery of various kinds may be determined upon as the need arises.



General Electric's New Track Type Limit Switch. The die-cast box is 4 in. high by 2 7/16 in. wide and 1 29/32 in. deep.

The switch designated as CR9440-A1A, has one normally open and one normally closed circuit. Its maximum carrying and breaking capacity is 5 amp. at 550 volts a. c. and on d. c. ranges upward from 0.4 amp. at 550 volts to 2.0 amp. at 115 volts.

The new device is operated by an 18 deg. movement of its operating arm from the normal position, an overtravel of 54 deg. being possible without causing damage to the switch. A precision mechanism on the operating arm affords simple, accurate adjustment of the arm to any position around the operating shaft. This mechanism consists of a worm-and-gear arrangement in which the threads on the bolt that clamps the arm to the shaft engage with threads on the latter. Double-break silver-plated contacts, opening and closing with a sliding motion, assure good electrical connections.

The switch, with the exception of its operating arm, is enclosed in a die-cast box 4 in. high, 2 7/16 in. wide, and 1 29/32 in. deep. Installation is simple. The operating arm moves in a plane parallel to the base of the switch; hence no right-angle mounting bracket is required. At the bottom of the case, a ½-in. conduit connection is provided. Because of its spring-return feature, the switch can be mounted at any desirable angle without affecting operation. A ball-protected oil hole at the front of the operating shaft simplifies lubrication. A removable aluminum cover provides convenient access to contacts and wiring studs. Contacts are easily removable.

New Hacker Test Presses

A further contribution in the field of precision printing is announced by The Hacker Mfg. Co., 320 So. Honore St., Chicago, Ill., which company has just brought out a new line of heavy-duty precision test presses. The series consists of two 19 in. by 25 in. and two 25 in. by 30 in. sizes, hand and power operated models.

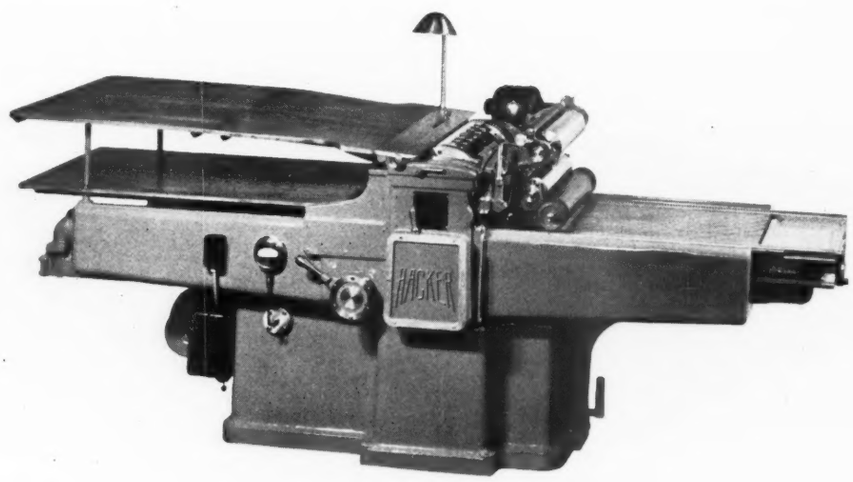
These are cylinder presses to check impression and form height to show what is in plates. The manufacturer states these are fine printing presses stripped down to the essentials of impression, distribution and register.

It is claimed these presses are capable of proofing the largest and heaviest plates which can be mounted in the bed without top makeready and will show the true dot formation. These presses can be used for check proofing in all the elements which delay production presses; inspection of type and plates, pre-makeready of plates, pre-lineup and register of small press forms, ink testing, color proofing, reproduction proofs and the printing of deluxe copies and dummies.

The bed reciprocates under cylinder and ink rollers. By an impression adjustment the presses are preloaded with several thousand pounds, cylinder bearers on bed bearers. This remains constant indefinitely regardless of overload or wear. Thus the cylinder rides the bearers—never the form. The impression, if abnormally overloaded, returns immediately to the rated setting without loss or injury.

On the motor-driven models, power is transmitted by oil on the hydraulic principle. The bed responds to a short throttle, moving fast or slow, stopping anywhere, reversing at any point.

The inker mechanism, it is claimed, is unique. A motor on either the hand or power-operated models, pre-distributes the ink at each end of the printing stroke, so that both passes are under freshly distributed form rollers, to insure equal ink coverage at the bottom as well as at the top of the largest plate or form. Ink is fed from the fountain rollers each stroke in an exactly measured amount for color uniformity. The inker is gearless. While inking the form the form rollers are driven by rubber tires on tracks. The vibrator, being



THE SILVERTONE NEWS

Published Every Now and Then by Silvertone Process Corporation
Subsidiary of Certified Dry Mat Corporation

Volume 1 NEW YORK, N. Y., JANUARY 1, 1935 **Number 1**

NEW SILVERTONE MAT MEETS YOUR EXACTING NEEDS

★ ★ ★ ★ ★ ★ ★ ★ ★

Accepting Trial Offer Will Convince You of Its Unusual Qualities

ABOUT three years ago the Silvertone Process Corporation announced the introduction in the United States of the Silvertone Process for high-class stereotyping purposes.

However, because of the special handling and technique required, Silvertone was not pushed energetically to the trade. Quietly, but none the less vigorously, research and experiment have proceeded to perfect the process so that it would fit in with American stereotyping practices.

We are happy to be able to announce today a new Silvertone, which while it is simple in technique is just as unique in its reproduction qualities.

Ready Conditioned for Use

The new Silvertone is available to the trade conditioned and ready for use. It is the only mat of its class that can be delivered *conditioned* ready for molding when and as received. It does not deteriorate either before or after use, and under proper conditions can be kept almost indefinitely. Besides, the new Silvertone has these outstanding features:

(1) It may be molded on the regulation dry mat roller either cold and handled like any ordinary dry mat, or it may be molded cold and transferred on the form and dried under the steam-table or any other drying apparatus.

(2) It may be molded under direct pressure, hydraulic or toggle, either cold or dried on the form in the press, or transferred on the form and dried under a separate drying apparatus.

Base is Certified Mat

Silvertone is the only mat of its class now on this market which is made in the United States. The base of the Silvertone is the Certified Dry Mat, which has been in extensive use in hundreds of stereotype foundries throughout the country during the past 11 years. The Certified bases are processed at Bush Terminal, Brooklyn, N. Y., with the Silvertone emulsions, and the entire operation conducted in this country so that Silvertones are distinctly and entirely a United States product.

The new Silvertones are ideally suited for the production of flat and curved stereotype plates of fine screen work (up to 150 screen), for color work where register is essential and for all high-class reproduction work.

How to Secure Samples

In view of the rather expensive cost of Silvertones we regret that we can not be as liberal as our parent organization, the Certified Dry Mat Corporation, with samples. For trial purposes Silvertones will be available in small lots at 20 cents each, with the understanding that as soon as the first 100 Silvertones have been ordered at the regular price of 35 cents each, the entire charge for samples will be refunded.

There is nothing to learn in the handling of the new Silvertone. It comes to you conditioned ready for molding. (It may, of course, be had unconditioned if you desire.) It is molded in the usual manner with the usual blanketing either under a roller or under direct pressure, is backed up in the usual way, and is cast as any ordinary mat would be cast. But the results are extraordinary.

Insist on Real Silvertones

Already the imitators are in the field. The flatterers who copy and imitate, and can make things cheaper but never so good, may offer you something "just as good," but for your protection we respectfully suggest that you insist upon the one and only Silvertone, and that you look for the Silvertone trade-mark stamped on each mat.

The Silvertone trade-mark is registered in the United States Patent Office and in practically all civilized countries of the world. The Silvertone Process itself is also protected by United States and foreign patents either already granted and/or pending.

In quantities of 25 and up the price of Silvertone is 35 cents per sheet, 20"x24", f. o. b. Bush Terminal, Brooklyn, N. Y.

We respectively invite your inquiries and your orders.

SILVERTONE PROCESS CORPORATION

(SUBSIDIARY OF CERTIFIED DRY MAT CORPORATION)

342 MADISON AVENUE NEW YORK, N. Y.

"Silvertone" and "Silvertype" trade-marks registered U.S. Patent Office. Patents granted and/or pending in all countries.

wholly self-contained, oscillates automatically in either direction without timing. Two large 4 in. diam. form rollers and large 3¾ in. diam. vibrator are removable instantly for washing or for exchange with another unit in another color.

In the hand-operated presses the cylinder and bed rollers are mounted in self-aligning ball bearings, the hand crank is back-geared, and the inker load is entirely removed since an inker motor does all ink distributing.

Each power-operated model is equipped with a 2 h.p. motor drive, a ¼ h.p. inker motor and magnetic starting switch.

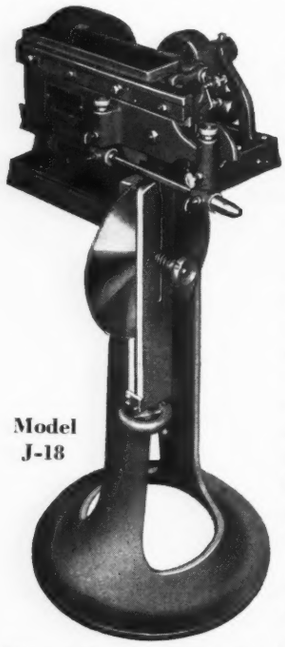
Further particulars may be obtained from The Hacker Mfg. Co. or through *Printing* EQUIPMENT *Engineer*.

Vulcan Molding Blankets

For the stereotype department, the Vulcan Proofing Co., First Ave., at Fifty-Eighth St., Brooklyn, New York, is making a molding blanket which, it is claimed, is buckle-proof because it eliminates buckling or distortion of stereotype mats when they are removed from the form, as well as permitting the mat to conform to the irregularities of the page without distortion. Through the use of this blanket the mat is forced deeply into the halftones in such a way as to hold the light dots and middle tones as well as the solids.

Heavy-Duty Saw Filer and Jointer

The Wardwell Mfg. Company, 3167 Fulton Road, Cleveland, Ohio, announces a new precision, Heavy-Duty Saw Filer and Jointer, which automatically files and joints circular saws up to 18 in. diam. and band saws of any width, with spacing of teeth up to ½ in. from point to point.



Model J-18

View of New Heavy-Duty Saw Filer and Jointer

This machine, it is claimed, is built for accurate filing and long, continuous life. The vertical and the filing arm slides work in dovetail ways and are gibbed for adjustment to take up wear. The file is held below the slide and to one side, so that the filings cannot enter into any of the working parts. Both ends of the file are adjustable by means of thumb screws on the file holders. The filing arm has an elliptical movement to permit any kind of hooked tooth being filed.

The vertical slide is operated by a hardened steel cam, working against a hardened plate. The filing arm is operated by a connecting rod inside of the machine. One end of the rod is attached to the end of the cam and the other end to the filing arm slide. To make the machine sturdy and smooth running. Being of the enclosed type, the machine is practically dust-proof.

Standard 6 in. or 7 in. files are used. The filing speed is 60 teeth per minute.

The machine is driven by a ¼ h.p. motor, direct-connected through universal coupling. Reduction of speed is obtained through a worm and gear which runs in grease.

U.P.M.-Kidder Form Roller-Setting Means

In the November issue, *Printing* EQUIPMENT *Engineer* carried a description and diagram explanatory of the new form roller-setting means for U. P. M.-Kidder Multi-Color Rotary Presses whereby it is possible to set the form rollers without the use of gauges.

In presses of this type, with several plate cylinders grouped around a single impression cylinder, the inking mechanisms are very compact and when the ink frames are racked up into operating position it has been inconvenient and difficult to reset or adjust form rollers. As constructed heretofore it has been customary to use form roller setting gauges for setting these form rollers as near as possible to the proper contact with plates. The new U. P. M.-Kidder method now provides a convenient means for the pressman to set the form rollers radially and individually to proper contact to the plates and circumferentially in proper contact with the vibrators without the use of gauges when inking mechanisms are racked back and in convenient position to reach the form rollers.

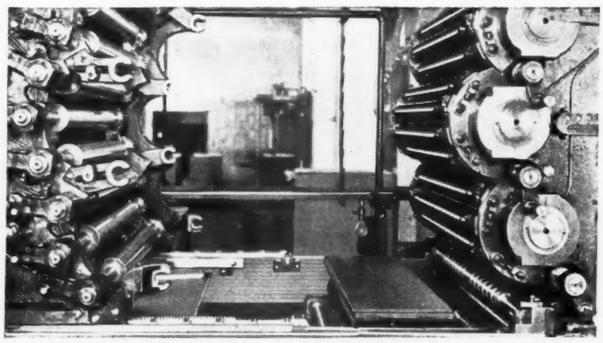


Fig. 1.—View of section of U. P. M.-Kidder Rotary Multi-Color Press with inking mechanism racked back and the form rollers in position for setting radially in relation to the plates on the plate cylinders.

In this issue are presented two photographic views of the form roller and inking mechanism as applied to a rackback type press. The setting means are explained as follows:

After making ready the plates on the plate cylinder, and with the inking mechanism racked back, as shown in Fig. 1, each group of four form rollers (there being four form rollers for each plate cylinder) are first set individually and radially to the desired contact with the plates.

After all the form rollers have been set as described above on all the plate cylinders the inking frames are racked up to the press in the usual way and locked in normal running position. A lever is now thrown over to a different position and the inking frames racked back again away from the plate cylinders as shown in Fig. 2. This time the form rollers

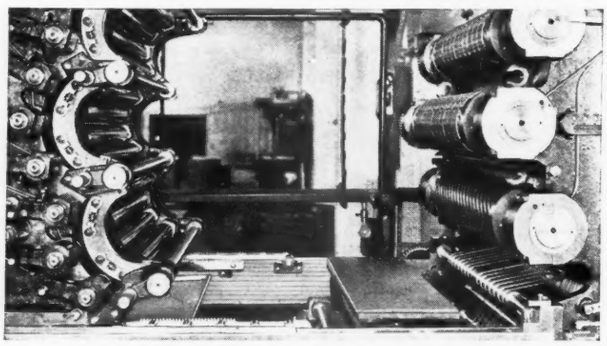


Fig. 2.—View of section of U. P. M. Kidder Rotary Multi-Color Press with inking mechanism racked back away from the plate cylinders in order to enable the operator to adjust form roller circumferentially to the vibrator.

are all racked back with the inking mechanism. While the form rollers are locked in this position, that is, racked back with the inking frames, they may now be set circumferentially in relation to the vibrator.

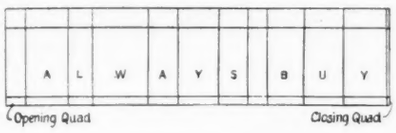
In setting the form rollers circumferentially to the vibrator the radial adjustment previously made to the plates will not be altered.

New Intertype Italic Matrices

A new style matrix for line composing machines, which permits kerned letters to fit closely, is announced by Intertype Corporation.

The body of these new display italic matrices presents an oblique character or casting face and a vertical rear body

An assembled view of new style Intertype Italic Matrices



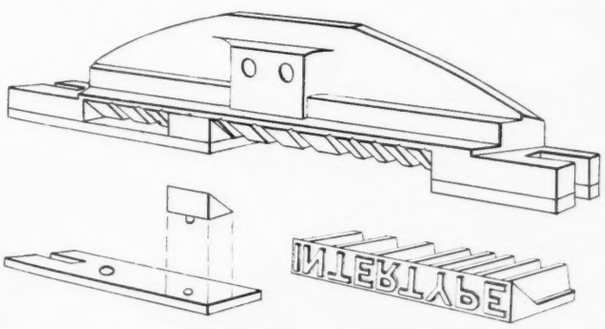
Back view of above assembled line of New-Style Intertype Italic Matrices

portion from top to bottom. This, it is stated, permits them to hang perfectly true and steady at all times so that they can be assembled in the new Intertype Composing Stick in the usual manner.

Opening and closing quads are provided for starting and ending the line and special spaces are provided in sizes 6 to 14 widths. Hair spaces are also provided for justification.

These matrices provide for proper fitting of the open or angular cap letters, such as A, L, T, V, W and Y as shown in the front view in the accompanying drawing. For this purpose special matrices are furnished with each font which have an oblique angle to correspond with the slope of these particular characters.

The first of the special new matrices delivered by Intertype was 48-point Cheltonian Bold Italic as shown in the drawing in reduced size. Others are now in process of manufacture.



Greater flexibility of Intertype Triangular Shelf Molds and Standard Universal Liners is now possible through the development of an exchangeable liner adaptor. The adaptor, it is explained, comprises a small block with a stud which fits in a hole near the casting end of the left-hand liner. When so applied, the block which is shaped like the recessed portion of the mold slot in which the shelf or overhang of the slug is cast, serves as a stop to close the recessed portion at the left end. The shape of the adaptor block required will be different for different height recesses. Intertype left-hand liners of any length or point size and provided with the necessary hole to accommodate one of the new adaptors, can be used for casting any length of slug in Intertype Triangular Shelf Style Head Letter Molds as well as all non-recessed Intertype molds.

This new style matrix is made without combination teeth, being designed for use with the new Intertype Composing Stick Attachment.

Intertype Corporation has adopted the use of Oilite bushings, particularly in the assembler bearings. It is claimed this is an important step toward elimination of troubles arising from excessive oil seeping out where it can contaminate matrices and in the other extreme, assures adequate bearing lubrication.

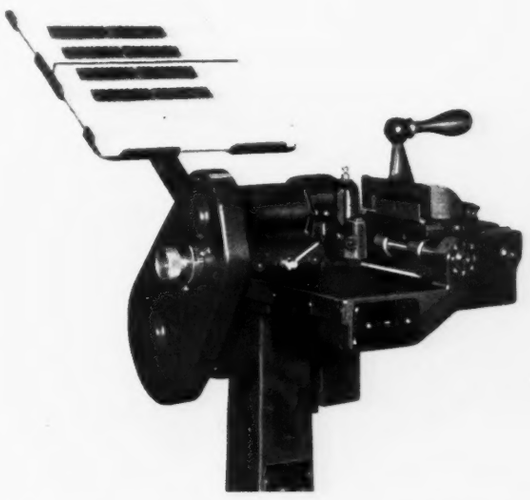
Oilite bushings are made of highly compressed grains of metal, within the pores of which oil is forced under pressure when the bushings are made. Thus, over a long period of time, the self-lubricating nature of these bushings makes it unnecessary to supply oil from the oil can.

The Ludlow Supersurfacer

The Ludlow Supersurfacer is a composing-room tool designed to take a very light surface-cut from the face of type or type slugs up to and including 72-point body size and 42-em measure. It is intended for use only on the bolder typefaces in the larger point sizes. From such slugs it removes any slight imperfections in the printing surface which sometimes occur in casting type metal into cold matrices.

The motor operating the Supersurfacer is mounted at the rear below the table. An endless "V"-type belt drives the cutter at 4200 r.p.m.

The cutter is equipped with sixteen individual inserted teeth ground on both ends so that the cutter may be reversed when one side becomes dull. Tests indicate that under ordinary operating conditions each side of one cutter will trim



Ludlow Supersurfacer which is designed to take a very light surface-cut from the face of type or type slugs up to and including 72-point body size and 42-em measure.

15,000 slugs before re-sharpening is necessary. If an average of 100 slugs is processed daily, with proper care one cutter would thus be usable for approximately a year before requiring re-sharpening.

Extending from the left side of the belt guard, as shown in the illustration, is a micrometer attachment for controlling the depth of the surface-cut to a fraction of a thousandth of an inch. The spindle runs in ball bearings of the latest and most approved design, featuring a specially constructed spring-backed end-thrust bearing which eliminates all end-play. The clamp holding the slug in the carriage is one of the features of the Ludlow Supersurfacer. The slug to be

processed is placed in the holder and clamped on its side. The seat is grooved so that any chips of metal will be brushed aside when the slug is placed in the clamp. This feature helps to overcome one of the principal difficulties encountered when resurfacing slugs, namely, that of holding the height of machined slugs to absolutely uniform measurement, not only throughout its entire length but also in relation to other slugs surfaced on the same machine. The slug is held in position in the clamping mechanism under spring pressure.

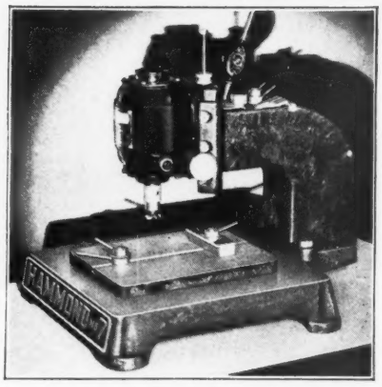
Before reaching the face of the cutter, the slug face is lubricated by a self-oiling felt roller. The shavings drop into a removable trim pan located just below the cutter.

The carriage on which the clamp is mounted travels on large round rails designed so they may be easily adjusted for possible wear. After the slug has traveled completely past the cutter, the carriage is automatically lifted away from the cutter upon the return stroke. The Supersurfacer is equipped with a special slug tray rack.

Under ordinary operating conditions ten slugs per minute may be surfaced. Each slug is rapidly processed in a single integrated series of simple motions, with no waiting and with almost no separation of the details of inserting, feeding, and removing the slug. The mechanism comprises a minimum number of adjustments and wearing parts.

New Hammond Router and Type High Planer

A Bench Router and Type High Planer is announced by the Hammond Machinery Builders, Inc., 1615 Douglas Ave., Kalamazoo, Mich. It is known as the No. 7 Router-



planer and is of cast iron and steel construction.

The motor is of ¼ h.p. capacity and has ball bearings. The table measures 13 in. by 13 in. The motor unit raises and lowers by means of a foot treadle. The machine is suitable for shell cast or type-high material. Standard equipment includes a supply of router bits, type-high planed, foot treadle with chain and clamps for holding both shell and type-high plates.

For further information respecting the new No. 7 Router Planer, you may write the company at its home office in Kalamazoo, or in care of *Printing* EQUIPMENT *Engineer.*

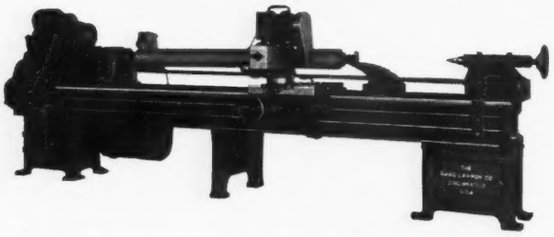
December 4, 1934.

Printing Equipment Engineer,
Cleveland, Ohio.

Gentlemen: Please accept my sincere appreciation for your valuable publication. It is filling a long-felt need the printing industry. Particularly is this true in the production of daily newspapers.

Sincerely yours,
V. G. MANNING, *Mechanical Superintendent,*
Santa Barbara (Calif.) *News-Press.*

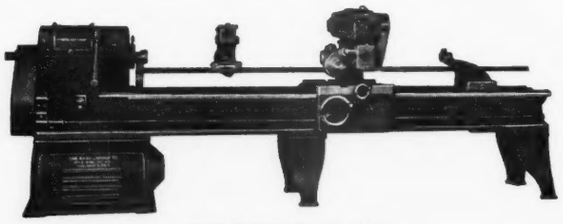
CECIL
RUBBER ROLLER FINISHING EQUIPMENT
IS AVAILABLE IN A MODEL TO SUIT YOUR PLANT



SERIES "AA"—Heavy duty motor driven, oil encased all geared head Rahn-Larmon Lathe, complete with Cecil equipment.

SERIES "LN"—Motorized countershaft, a sturdy Rahn-Larmon Lathe, complete with Cecil equipment. An investment saving machine.

SERIES "LN"-P—A progressive equipment with an inexpensive Rahn-Larmon Lathe, complete with Cecil equipment.



SERIES "J"

Cecil Rubber Roller Finishing Machine, specially designed to completely refinish rubber rollers.

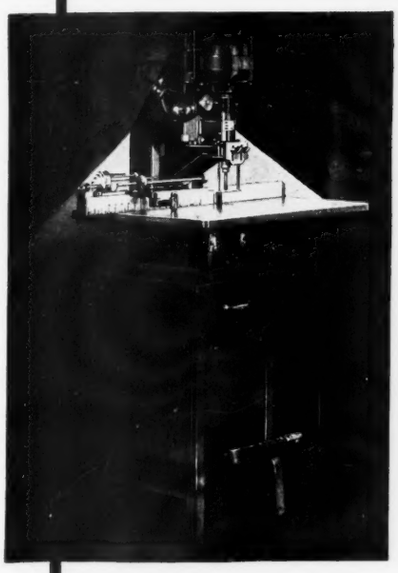
NATIONALLY REPRESENTED BY THE GOSS PRINTING PRESS CO.

The Metal Cutter Takes "the Grind" Out of Roller Grinding — "IT CUTS"

Lathes are available with any length bed — to suit your conditions.

DUST-LESS EQUIPMENT CO.
1406 MONROE ST., N. E. WASHINGTON, D. C.
Write for Prices and Full Information

ON ANY POINT BY POINT COMPARISON



The Challenge Flexolite, as shown above, supplies an abundance of good light over the working area. No glare! . . . Note strong stand with drawer and the broom-high legs for easy cleaning. Machine is made in two sizes—Styles B and C.

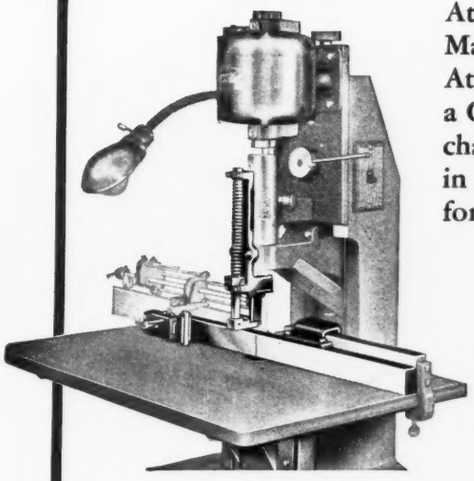
A CHALLENGE PAPER DRILLING MACHINE IS THE BEST BUY

COMPLETE simplicity of operation—amazing speed—flexibility of production—high quality work—and pronounced savings . . . these are a few of the "reasons why", the important factors that make the Challenge Paper Drilling Machine an outstanding value—a worthwhile investment for any shop.

With a Challenge Paper Drilling Machine, you can reach out after a greater volume of business—add to your earning capacity—and get the orders on a close price basis. This machine turns out work in one-eighth the usual time—permits drilling of as many as six holes (more on special order) in as many positions at one setting—is portable, safe, and sturdy—automatically ejects chips—and is efficient on long or short runs.

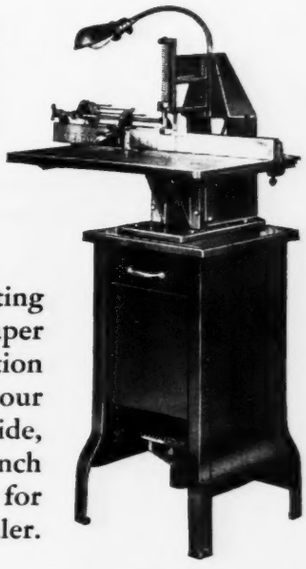
The table is moved up and down by a slight foot pressure, leaving *both hands free* to handle paper and operate the multiple side-guide. Stops can be set at any position within the range of the machine with a minimum spacing between holes of 0—an exclusive Challenge feature. The drill cannot clog.

Investigate every timely advantage of the Challenge Paper Drilling Machine—write for prices and illustrated data today!



Pat. No. 1,928,383

At left, is the Challenge Paper Drilling Machine with the Challenge Slotting Attachment which makes the machine a Combined Drill and Slotter. You can change from drill to slotter or back again in less than three minute. Write today for full details, or see your dealer.



At right, is the No. 14 Challenge Slotting Machine. If you already have a paper drill, you can increase your production and profits by adding this unit to your equipment. It has multiple side-guide, six stops, and will slit holes ¼ to ½ inch and slot holes 11/32 to ½ inch. Send for complete information, or ask your dealer.

THE CHALLENGE MACHINERY CO.
GRAND HAVEN - - MICHIGAN

CHICAGO, 17-19 E. Austin Ave. S-157 200 Hudson Street, NEW YORK

The FIRST

100

are the hardest . . .

IT WILL be a happy new year . . . happier at least . . . for America's hundred most alert publishers . . . the hundred who have installed Kemp Gas Immersion Stereotype melting . . . the hundred who *right now* are saving 40% and upwards of their former stereo heat cost.

Kemp begins the new year on the second hundred. Will you be one of them? Or will you wait until 1936 or '37 or '38 to make the savings that would mean so much to you right now?

Remember two things . . .

First: Every Kemp Stereo job is guaranteed to save 40% *or more.*

Second: No other improvement in newspaper printing equipment ever moved so far *so fast.*

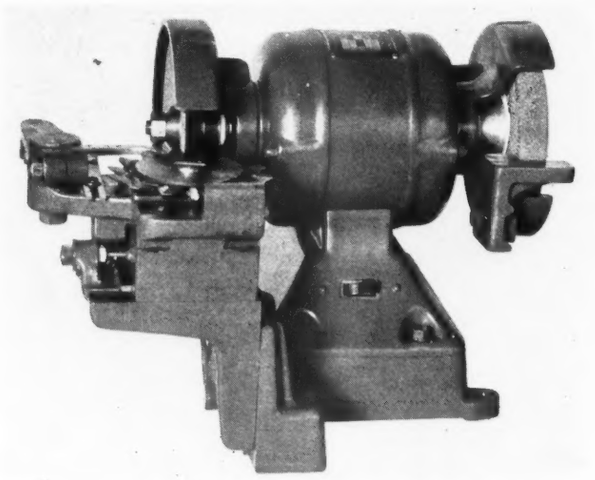
Want to look into it? Write, wire or phone The C. M. Kemp Mfg. Co., 405 E. Oliver St., Baltimore, Md. (Telephone Vernon 1166)

KEMP of BALTIMORE

Stereotype Cutter Grinder

This picture illustrates the Hisey-Wolf Cutter Grinder, made by the Hisey-Wolf Co., Cincinnati, Ohio. The machine has been developed especially for grinding stereotype cutters and saws, either right or left-hand.

The arbor which supports the cutter during the grinding operation can be changed quickly for any size hole in the cutter. It is mounted on a dovetail slide, by means of which



Front view of Hisey-Wolf Stereotype Cutter Grinder. The cutter is mounted on a slide and tooth spacing is obtained by means of an index plate.

the cutter is fed to or retracted from the grinding wheel. The grinding wheel operates at 3500 r.p.m. and is a standard 6-in type 12-cutter grinder wheel.

The wheel at the right end of the shaft is furnished with standard tool rest and may be used for regular offhand grinding purposes.

The indexing device is adjustable and adapts any number of teeth or diameters from 4 in. to 5 in.

The machine has ball bearings enclosed in dirt-proof chambers. The ¼ h.p. motor is totally enclosed. A make-and-break switch is furnished. Motors are furnished 110-220 v., 60 cycle a. c., or 115-230 v., d. c.

Further information may be obtained from The Hisey-Wolf Machine Co., Cincinnati, Ohio.

Frank A. Simpson Passes

Frank H. Simpson, director of the Printing Machinery Company and father of Harold T. Simpson, president of that company, died December 18, 1934. The late Mr. Simpson was associated with the Printing Machinery Company for many years. His hobbies were hunting and fishing and it was while he was on his farm in Indiana that he suffered an injury that caused his death.

American Type Founders in Reorganization

American Type Founders was taken out of bankruptcy December 11, 1934, by a joint action in cooperation with creditors' committees.

With the termination of the two-year-old bankruptcy action, the company passed into reorganization under Federal Court supervision and the same trustees, Thomas R. Jones, Frank C. Ferguson and Charles L. Carrick.

This, it is said, was made possible by the increased business the company has experienced under the management it has had for the past two years. Substantial sales increases accompanied by reduced operating expenses have served to place A. T. F. on a firm financial footing, it is reported.

1884 *Fifty Years of Invention and Leadership: Originators of Flatbed Web Presses, Twin Presses, Tubulars, Heavy Duty Unit Type* **1934**

And NOW another:

The UNITUBULAR
a DUPLEX Press

THIS PRESS

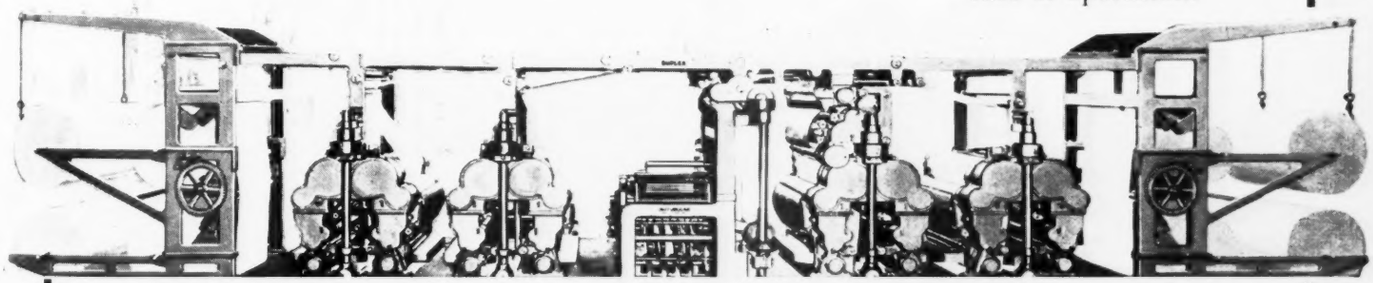
IS NOW PRINTING

The Capital Journal

Salem, Oregon

In its beautiful new plant, among the latest and best on the coast in design and efficiency. Publishers are cordially invited to inspect this plant and press.

ALL page combinations by twos.
UNIT type superduty design.
GREATLY improved ink distribution.
COLOR facilities hitherto unknown.
SPEED increased 50%.
ROLLER and ball bearings.
ACCESSIBILITY and ease of operation.



The above illustrated CAPITAL-JOURNAL "UNITUBULAR" has color on one unit and rolls at ends of press. Color mechanism can be put on any unit, and substructure with reels instead of roll stands is optional. The UNIT CONSTRUCTION allows unlimited capacity expansion at any time.

"THE PROOF OF THE PUDDING" — Mr. Putnam of the CAPITAL-JOURNAL writes: "The ideal press . . . The Unitubular is perfect in construction . . . Started without trouble on the first edition . . . Has run a week without a flaw . . . We have a beautiful new building but the Unitubular is the finest thing about it."

Six of these machines already sold

WRITE for FULL INFORMATION — SEE IT in operation, or at our works

THE DUPLEX PRINTING PRESS CO.

BATTLE CREEK, MICHIGAN

NEW YORK **CHICAGO** **SAN FRANCISCO**

Some of the large price figures available in LUDLOW matrices—

$3.50

$9.50

$2.25

Ludlow matrices for these large price figures, cast vertically on the slug, which have been available for many years to Ludlow users, can be supplied in all the popular Ludlow typeface families.

Ludlow Typograph Co.
2032 Clybourn Avenue, Chicago, Illinois

Rollers From Synthetic Resins

Writer Defines Characteristics and Properties of Various Kinds of Rollers, Including "DuPrene"

By A. L. FREEDLANDER*

The first installment of this article appeared in the December issue of Printing EQUIPMENT Engineer. *Mr. Freedlander described and defined synthetic resin as a roller material and presented conclusions arrived at as a result of investigational work in the search for a new roller material. He also described the "perfect" inking roller and divided the various kinds of inking rollers roughly into five classifications.*—EDITOR.

G.—THE GLUE-GLYCERINE ROLLER

GLUE-GLYCERINE rollers have been used since the beginning of the printing industry. A good glue-glycerine composition possesses many of the properties desired in a good form roller. When new it has a nice surface tack which is essential. Its hardness can be varied to meet changing seasons and different press conditions. The research work of the last twenty-five years has been to duplicate the soft resilient properties of the glue-glycerine compound.

A brief review of what the patent literature reveals may be interesting. Besides these two essential ingredients (glue and glycerine), there may be present various oils, molasses, borax, etc. What work has been done on the strict glue-glycerine roller has been done for the purpose of producing an insoluble and infusible compound. C. E. Sohn in British Patent No. 12,677, May 22, 1914, recommends addition of hexamethylenetetramine to the glue-glycerine in order to produce an insoluble, infusible and resilient roller. In another patent No. 2167, 1915, he recommends addition of furfural. In British Patent No. 292,894, March, 1929, sorbitol is recommended.

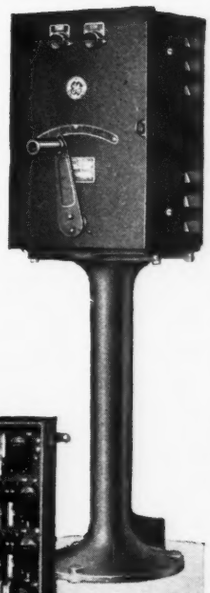
H. Scheidemandel and W. Wachtel in British Patent No. 348,384, May, 1929, employ a process using gelatine pearls soaked in glycerine without heating.

H.—THE VULCANIZING OIL ROLLER

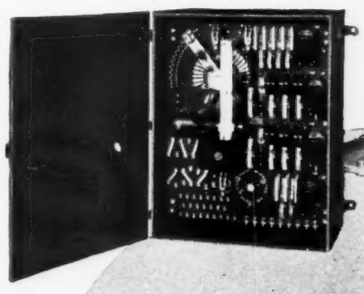
It has been known for centuries that certain oils can be hardened by the addition of heat and sulphur. The reaction

*Vice President, The Dayton Rubber Manufacturing Company. Discussion by W. S. Robinson, Manager, The McCall Company, and E. R. Bridgewater, Manager, Rubber Chemicals Division, E. I. du Pont de Nemours & Co. Abstract of paper presented at the Fifth Conference of the A. S. M. E. Printing Industries Division, Philadelphia, Pa., October 8-9, 1934.

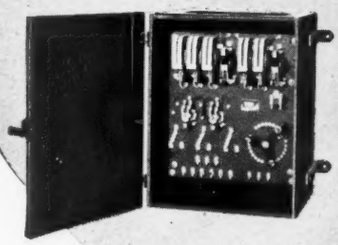
THE RIGHT CONTROLLER
for Every Type of Printing Press

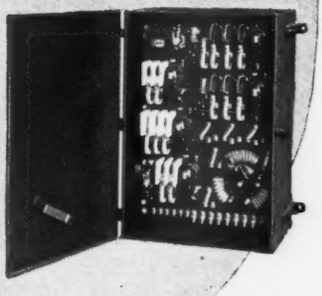


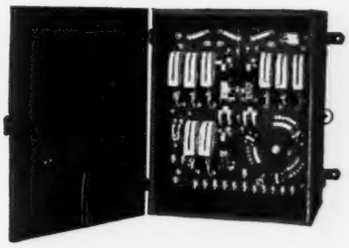
G-E pedestal-type preset-speed controller for job presses, folders, and wire stitchers



G-E remote-operated preset-speed controller and master switch. This new type of controller supplies remote preset-speed selection from a master switch on the press. It is especially suitable for offset presses and large color presses requiring adjustable high torque, adjustable slowdown speeds, and preload adjustment.







Typical G-E preset-speed a-c. controllers. For all presses in your plant requiring preset-speed control, from the smallest jobber to the largest cylinder press, G.E. can supply the right controllers

FOR every press and machine in your plant, General Electric manufactures the right controller. Illustrated on this page are preset-speed controllers—part of the complete G-E line of a-c. and d-c. controllers.

G-E controllers offer you important features which mean better press work in your plant. They provide for high starting torque and a wide operating-speed range, with slowdown speeds of 25 to 30 per cent. Easy regulation of press speeds to accommodate different classes of work is made possible by convenient adjusting devices on the front of the controllers.

Teamed with G-E motors, these controllers will give you press-drive equipment which combines the utmost in efficiency and dependability with long life and low maintenance.

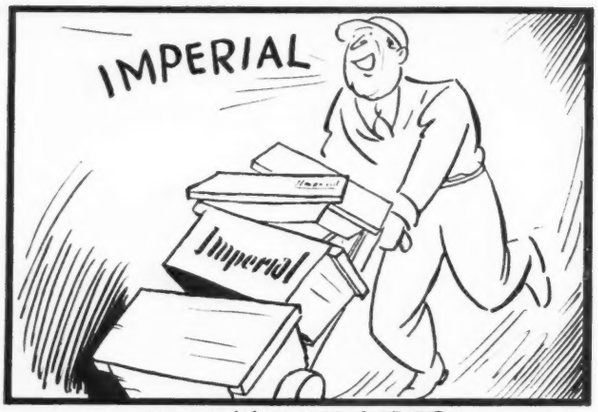
G-E engineers, thoroughly experienced in making all types of printing-plant installations, are ready to help you with your electric-equipment problems. Furthermore, General Electric maintains factory stocks of printing-plant equipment and a nation-wide system of warehouses and service shops which assure you of prompt, satisfactory service when it is needed.

Whether you are buying new presses or modernizing existing ones, when you require electric equipment get in touch with one of our printing-equipment specialists at the nearest G-E office. General Electric Company, Schenectady, N. Y.

080-28

GENERAL ELECTRIC

START THE NEW YEAR RIGHT



ONE MONTH LATER

Imperial
METAL

THE IMPERIAL TYPE METAL CO.
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product is called factice. Depending on the type of oil, amount of sulphur, time and temperature employed, products can be obtained which possess a certain degree of elasticity and resilience.

In place of sulphur, sulphur chloride can be used and the reaction carried out at room temperature. Since water is not a constituent, there is much less tendency of this type of composition to melt, it is stated.

The chief difficulties with the vulcanized oil roller: 1. Is the tendency to lose its surface tack quickly and become glazed. 2. The difficulty of obtaining a uniform hardness. 3. Relative short life due to action of the ink.

Rollers of this type have not been widely used as very little appears in the literature of this type of composition. S. Kutner, U. S. Patent No. 1,397,528, recommends a material for cores of printing rollers, by mixing corn oil, linseed or similar vegetable oil with lime mineral oil, sulphur chloride, agitating, cooling and then adding more sulphur chloride and pouring into molds while hot.

Since according to the patent literature the vulcanized oil roller has such a delicate surface, efforts have been made to overcome this. O. Ludner, U. S. Patent No. 1,404,209, recommends printers' rollers formed of vulcanized oil with a surface portion of vulcanized rubber. D. Gestener, British Patent No. 277,058, recommends rollers made with a resilient body of vulcanized oil compounded and thinly coated with a flexible gelatine compound which is rendered insoluble so that it is not sensitive to temperature variations. We think the above brief review will indicate the trend of this type of roller development.

I.—WORKABILITY AND LIFE OF RUBBER ROLLERS

Referring again to rubber rollers and their use in the newspaper field, a roller of 30 to 50 durometer hardness is generally used. The life of this roller is relatively long, especially through regrinding occasionally. The action of the inks swells the rubber somewhat. Even at average speeds the strain on the bearings, type, etc., can be unsatisfactory if not watched. The rollers may swell and tighten up on the bearings and cause bad printing before they are removed for regrinding.

The author developed and introduced the first successful rubber rollers for newspapers in 1918 (Freedlander U. S. Patent No. 1,344,631, filed March, 1919). At that time he thought that a durometer hardness of 30-35 was making long strides in softness coupled with ink resistance and ability to grind smoothly. These rubber rollers were also tried out for magazine and catalogue printing. They did not prove successful; because the properties required in a roller for this type of printing differ greatly from those required in a newspaper roller.

For example:

1. Softness—instead of a rubber newspaper durometer hardness of 30-32, fifteen to twenty and down to ten or less is desirable.

2. Smoothness of finish for form rollers more particular than newspapers.

3. Freedom from column cutting. A newspaper changes daily so that column lines do not come at the same place. Magazines or catalogues may run weeks with columns in the same place. The softer the roller as a rule, the less the cutting.

4. Washing is more particular and frequently the washes are more drastic on the roller.

5. The surface of the form rollers must be kept free from any blemishes or cuts.

6. The tack is different and types of ink vary greatly, requiring different tack to meet different requirements.

7. Wide variation in speeds and operating conditions.

From that time up to now the author as well as others has been constantly working on rubber roller compositions to meet these conditions. Finally a rubber roller was produced of eighteen durometer hardness which was considerably softer than the rubber newspaper rollers. By great effort it was made smooth enough to try on a McKee four-color press. It lasted ten days before it washed up with

During the past five months the 24 Autopasters used by The New York Times handled 28,597 rolls of newsprint and spliced 98.8% of them while running at full speed.

The now antiquated practice of slowing down a press for making pasters not only uses up valuable time and greatly increases power consumption, but it destroys good newsprint by creating an extraordinary amount of white and printed waste.

The Autopaster shortens the duration of every run and makes more runs possible, with less effort, in the pressroom's day.

WOOD NEWSPAPER MACHINERY CORPORATION

MAKERS OF FINE NEWSPAPER MACHINERY

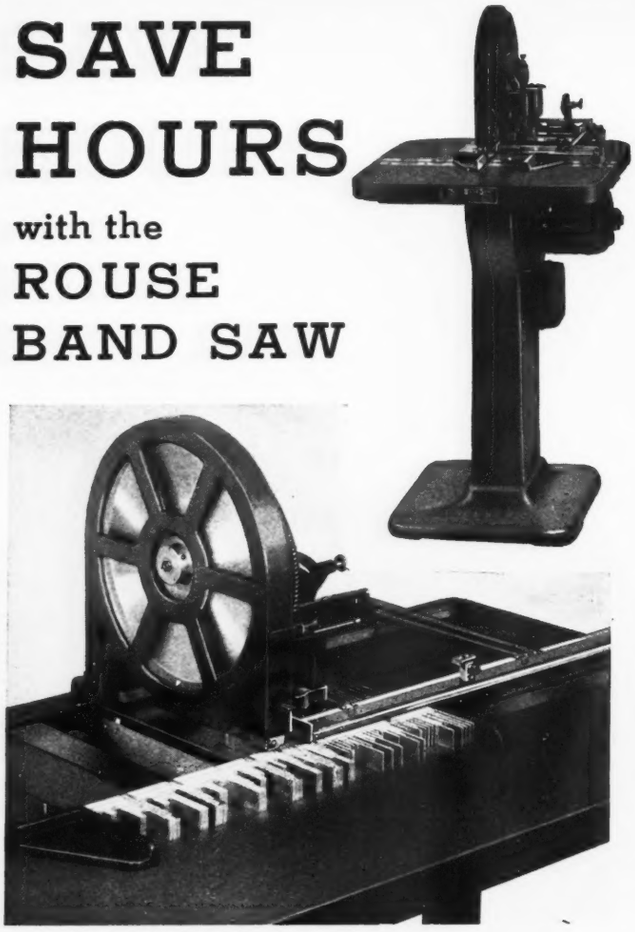
Originators of

Automatic Stereotyping *Modern Fast Newspaper Printing* *Automatic Web Splicing*

SAVE HOURS

with the

ROUSE BAND SAW



IN 35 SECONDS

The Rouse Band Saw will cut down 17 inches of slugs of UNEQUAL measure. It automatically selects slug lengths, aligns them instantly, feeds without adjustment and cuts to exact measure.

EASY AND FAST

The Rouse Band Saw is easy to operate and almost automatic in performance. Special guide cast in slug indicates measure selection and the saw does the rest. Eliminates tedious setting of gauge and sawing a few slugs at a time.

NO EXPENSIVE MACHINE CHANGES

The Rouse Band Saw is sold complete with all equipment necessary to operation with two machines. No mechanical changes are necessary on line casting machine. Special vise jaw is part of the equipment furnished.

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No other machine offers the time-saving possibilities of the Rouse Band Saw. It shortens time between machines and make-up bank, without slowing machine production.

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There are two sizes. The coupon or a note on your letterhead will bring details and prices, without any obligation to you. Write NOW.

H. B. ROUSE & COMPANY
2216 Ward Street, Chicago, Illinois

We have——line casting machines. Send circular advertised in January Printing Equipment Engineer.

Name_____

Address_____

difficulty, threw ink and had to be removed. Harder rubber rollers while somewhat more ink resisting were entirely unsuitable for fine halftone work as well as presenting other difficulties.

J.—THE ADVANTAGES OF THE SLEEVE-TYPE ROLLER

It was thought that a very smooth thin outer sleeve could be utilized with a very soft base underneath. The advantage being its smooth surface and possibly it could be made somewhat harder than the base underneath, could be replaced economically, etc. (Freedlander U. S. Patent No. 1,608,206, November 23, 1926. This pioneer patent laid the foundation for subsequent developments. Its principles have been continuously used since that time as the basis for improvements.)

Hundreds of experiments were run with rubber rollers during all these years by the author and he came to the conclusion that a natural rubber roller was not practicable, as materials were then known for magazine or catalogue work, as a form roller. But the years of research did show that a very soft durable natural rubber composition could be made that could be used as the base if a durable compound could be found for the outside as a sleeve without the disadvantage of natural rubber.

K.—SYNTHETIC RUBBER AS A BASE FOR SLEEVE

The author developed substitute materials that were satisfactory for our purpose; we were ready immediately to put our ideas into commercial production with this type of material for the sleeve which met the requirements that we had worked out. In a very short period we had a roller built and put into operation. Our work had been so extensive in this matter in the solving of the various problems that we immediately recognized this synthetic rubber as one of a number of materials that could be employed, but synthetic rubber had qualities for meeting the particular problems that then confronted us. It must be noted that synthetic rubber is only a general name for a material that can be compounded with hundreds of different ingredients, therefore, hundreds of experiments were run on the proper materials, for the sleeve or outer covering. Special processes, new and entirely different types of grinding machines were developed and rollers put out in every possible class of service that could be done conveniently. It was found that a range of softness of the base and sleeve were required so that today a printer can obtain repeatedly anything from a very light "tack" to a heavy "tack" and in any hardness from a very soft roller approximately a very soft glue-glycerine roller to a hardness approximating a newspaper rubber roller.

L.—THE SYNTHETIC RUBBER SLEEVE

The synthetic rubber composition is used as a thin outside sleeve applied by a special process that does not come off under any conditions of service based on a very large number that have been running commercially in every type of service for a long time. In fact entire plants have been equipped with them for almost two years. On the other hand, the sleeves can be removed easily in a few minutes by several methods that have been developed. This is especially advantageous if the sleeve has to be renewed. However, on numerous tests after months of running it has been found that the the ink penetration into the sleeve is practically zero, and practically no sleeves have had to be replaced to date.

However, in certain kinds of inks that oxidize rapidly, an oxidized coating may form after a time that the wash being used may not remove. The remedy may be either a different wash or after lightly polishing the roller for four or five minutes the film is removed and the surface of the roller is as good as new. The sleeve composition polishes very easily and very smoothly; grinds smoothly in any case where damage may make it necessary. Where extremely "tacky" inks are used the rollers can be specified with very little tack. The author's experience has been to date that the above cases are unusual.

Mechanical Executives Like BOOTH Products

Printers' ZINK Cut Cement

50 cents per New Large Tube

Lots of 1 dozen, $5 per dozen tubes
Lots of 6 dozen, $4 per dozen tubes
Gross lots $3 per dozen tubes

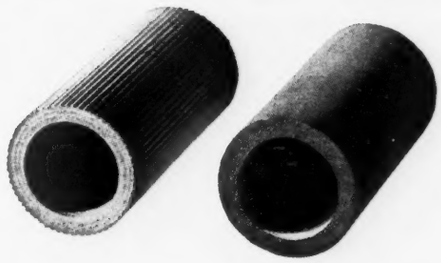
Users of Booth's Printers' ZINK Cut Cement are increasing rapidly. As a result, repeat orders come to us in greater numbers every month. Read what a mechanical executive thinks of this Cement:

"Please rush to us by parcel post one dozen tubes of your Printers' ZINK Cut Cement.

"We bought a dozen trial tubes several weeks ago and find that the Cement certainly does the work. We have not had to rerun an ad for cuts being crooked since we started using your cement."

GEO. W. HOLLOWAY,
Supt. Composing Room,
Nashville (Tenn.) *Banner*.

BOOTH'S "GREEN" ROLLS
FOR LINE-CASTING MACHINE KEYBOARDS



Constant diameter, lasting resiliency and tough cam tread—all these have won increasing favor and repeat orders. A laboratory product. Have *you* tried them?

Corrugated or Plain, $1.20 per pair; $6.60 per dozen; 50c each in lots of 100.

BOOTH'S Engravers' Concentrated Rubber Cement, $7.50 per 5-gallon can

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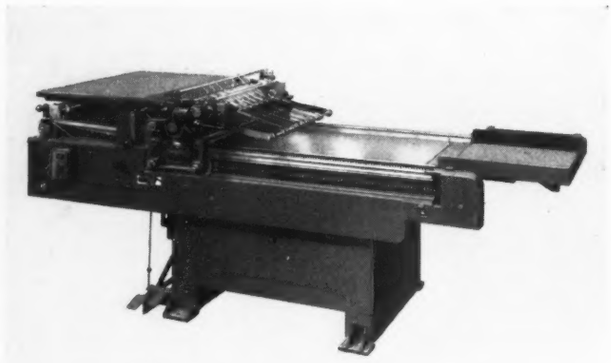
VANDERCOOK
No. 325A POWER
PAGE PROOF PRESS



SATISFACTORY! That was the endorsement of George E. Pancoast of the Hearst Newspapers on April 26, 1934. Then, they had two No. 325A Vandercook Power Page Proof Presses in their plant.

"These machines will, in a short time, pay for themselves," Mr. Pancoast wrote. On December 11, 1934, they ordered a ***third*** No. 325A.

Performance in production gave the evidence that sold this third press. Better service to advertisers, quality proofs quickly are important to every publisher.

No. 325A Vandercook Power Page Proof Press gives 1000 full-size newspaper page proofs per hour. Forms may be proved in stereotype chases without printing the chase. Proofs of large or small advertisements in galleys may be obtained with equal facility.

Complete specifications on Vandercook No. 325A await your request. Write on your letterhead or use the coupon below.

VANDERCOOK & SONS, INC.
908 North Kilpatrick Avenue **Chicago, Illinois**

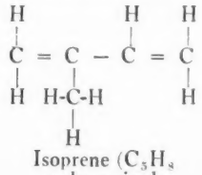
Please send information on No. 325A Vandercook Power Page Proof Press.

Name_____

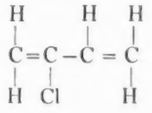
Address_____

M.—THE SYNTHETIC RUBBER, DUPRENE, ITS HISTORY AND SYNTHESIS

The synthetic rubber referred to is "DuPrene," developed by the du Pont de Nemours Company. The production of this material from coal, limestone, salt and water represents one of the most interesting chemical developments of our times. "DuPrene" may be regarded as the alpha-polymer of chloroprene. "DuPrene" may be regarded as isoprene rubber in which the methyl group is replaced by chlorine to produce chloroprene rubber. It must not be confused with chlorinated rubber which is a toally different product. An inspection of the structural formulae of isoprene and chloroprene demonstrates the definition above.



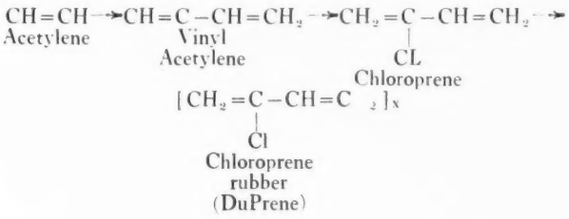
Isoprene (C_5H_8) polymerized gives natural rubber



Chloroprene (C_4H_5Cl) polymerized gives "DuPrene"

The alpha-polymer of chloroprene shows an X-ray diffraction pattern similar to rubber. It also exhibits the so-called Joule effect similar to rubber. "DuPrene" differs from natural rubber in that it has a much less tendency to imbibe organic liquids and that it is less susceptible to deterioration due to oxidation.

The reaction for the production of commercial "DuPrene" is carried out as follows: Acetylene when treated with cuprous and ammonium chlorides yields vinylacetylene. By the addition of one molecule of hydrogen chloride, this gives chloroprene (2-chloro, 1:3 butadiene). The chloroprene polymerizes to produce a rubberlike material. The reaction steps may be illustrated as follows:



Acetylene → Vinyl Acetylene → Chloroprene → Chloroprene rubber (DuPrene)

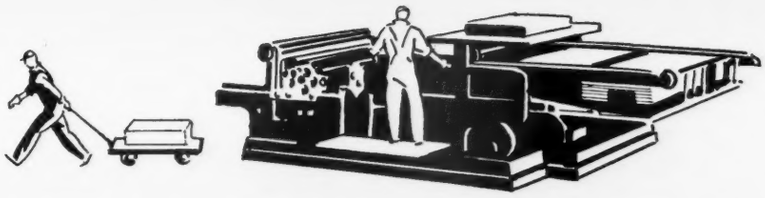
N.—THE CHEMICAL AND PHYSICAL PROPERTIES OF "DU PRENE" AS A SLEEVE MATERIAL

Fully polymerized chloroprene closely approaches natural rubber in many of its physical and chemical properties. Its tensile strength and elasticity are almost equal to that of natural rubber. It has resistance to inks and oxidation, and washes, including kerosene, gasoline and the like.

When this material has been properly compounded with suitable resins and processed, it can be used for form rollers both for flat and rotary presses and lithographing presses. This material can be compounded to produce any tack desired and to hold its tack. Under continuous service the material will not slough or become gummy, even though operating temperatures and speeds are high.

Synthetic rubber rollers, of course, must retain in addition all the good properties that have been found in natural rubber rollers for newspapers such as long life, reasonable cost, good printing, freedom from adjustment under any climatic conditions.

It is realized that over five hundred possible different ingredients may be used in making inks. Likewise, probably an equal number can be used in compounding synthetic rubber. Consequently the definition and statement with reference to a perfect roller made earlier in this paper still applies. However, all results to date indicate we are making progress.



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IT is one thing to reduce friction in printing press bearings, but another thing to assure the operating precision demanded in modern printing equipment. No bearing less accurate than the Timken Tapered Roller Bearing can meet today's printing requirements with such sureness and consistency.

Even on plate and impression cylinder shafts, where operating tolerances are as close as those on modern precision machine tool spindles, Timken Bearings have demonstrated their ability to match every need. Taking friction elimination and power saving for granted, you naturally want the bearings that will enable your equipment to produce high quality printing at higher and higher speeds—and to do it at consistently low cost for operation and maintenance.

There is no substitute for the exclusive combination of Timken tapered construction, Timken positively aligned rolls and Timken Alloy Steel.

THE TIMKEN ROLLER BEARING COMPANY, CANTON, OHIO

TIMKEN *Tapered Roller* **BEARINGS**

In Calm or Storm

CERTIFIED MATS are not just fair weather friends. While they amply repay the pains of expert handling, they also have shown their worth in many emergencies, when lack of time or perhaps some equipment trouble put them to an unusual test.

After pulling out of seemingly impossible jams, many a stereotype executive has written us, "Certified Mats saved the day." By no means trouble proof, they are mighty good mats to have when conditions go wrong.

For dependable stereotyping, rely on Certified Mats, made in the U. S. A.

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CERTIFIED DRY MAT CORPORATION

338 MADISON AVE. NEW YORK CITY

Certified DRY MATS

. . Conveyor

(Continued from page 10)

rubber gaskets. The frame is constructed of 1½-in. by 1½ in. by ⅛-in. angle iron, held together with ½-in. cold-rolled steel tie rods. A 130-ft. single-ply, one-piece Tannate belt running in V-shaped pans is the conveying vehicle. The pans in which the belt travels are made of 16-gauge black iron, 4 in. wide, turned up 1 in. on each side. This turn-up is only ¼ in. from top to bottom and is for the purpose of keeping the paper working off the edges as the proofs travel over the 65-ft. span. There are eleven 3-in. by 2-in. ball bearing pulleys and six 6-in. by 2-in. ball-bearing pulleys. The small pulleys are used on the feeder belts and the large pulleys are on the main belt line. The whole mechanism is driven by a ½ h.p. ball-bearing motor. Power is transmitted from the motor to the belt by a counter-shaft drive, using two V-type rubberized belts. The drive is mounted on the frame just under an idler capable of taking up a two-foot slack.

Though built without pattern, this conveyor causes no trouble and the bulkiest proof is taken to the proof room in 6¼ seconds. It picks up and transports one piece of copy with one proof or a large bundle with equal facility and dispatch.

Thompson Sales Manager

It has been announced by L. S. Allstrum, general manager, that Arthur S. Thompson has been appointed Sales Manager of the Geo. H. Morrill Co. Div., General Printing Ink Corporation and the Geo. H. Morrill Co. of California, effective January 1. Mr. Thompson will have supervision over all sales. His many friends will be pleased to learn of his promotion.

Harry Barch Loses Wife

The many friends of H. L. Barch, foreman of the Illinois *State Register* composing room, Springfield, Ill., will regret the passing of his wife on Dec. 12. Burial took place Dec. 14. Services at the grave were conducted by members of the American Legion. Mrs. Barch was a registered nurse in the United States Army Nurses' Corps during the World War. Mr. Barch also mourns the death of his father who passed away Oct. 18 at the age of 80 years.

OF VALUE TO MR. RUSSELL

October 7, 1934.

Printing Equipment Engineer,
Cleveland, Ohio.

Gentlemen: I believe I get more information out of your magazine than any other printing magazine I receive.

HARRY RUSSELL,
Photo-Engraving Dept.
Fort Orange Paper Co.,
Castleton on Hudson, New York.

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When you are in the market for equipment or supplies consult this Catalog. The concerns advertising in this issue comprise most of the leaders of the industry. The equipment and supplies displayed and described in these advertisements are among the best available. This is why we suggest you consult the Catalog Number before placing your order for equipment or supplies—and in placing your inquiry or order from these advertisements please mention *Printing* EQUIPMENT *Engineer*.

For your convenience we are listing below the concerns advertising in our 1935 Catalog Number:

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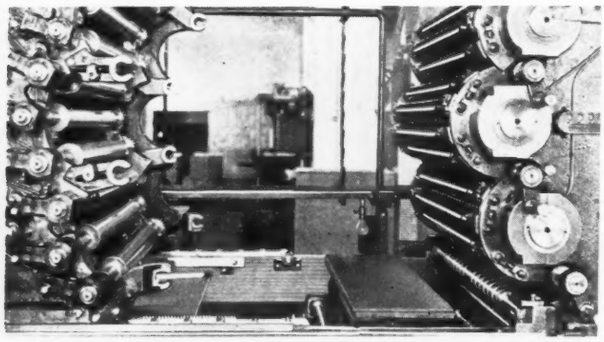
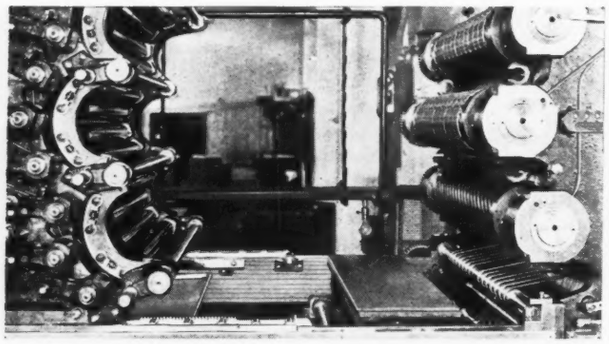
REGULATION OF DISTRIBUTION ON COLOR PRINTING SIMPLIFIED

PATENTED FORM ROLLER SETTING MECHANISM ON ROTARY PRESSES ENDS NEED FOR ROLLER GAUGES

Complete accessibility and ease for accurately setting form rollers without the need of form roller gauges are now achieved by the patented form roller setting mechanism on U.P.M.-Kidder Rotary Presses. The photographs tell the story.



POSITION 1 The press having been plated up with the inking mechanism racked back, the form rollers can now be put in position grouped around the plate cylinder. The operator walks into the press and sets the form rollers radially to the cylinder, for accurate contact with the plates.



POSITION 2 After the form rollers have been set radially to the cylinder, the inking mechanism is racked up into operating position, a lever thrown or repositioned, and the inking frames rolled back again, in which case the form rollers will now rack back with the inking frames, permitting the operator to walk in and set the form rollers circumferentially to the desired contact with the vibrators, without disturbing the radial adjustment to the plates.

This is the latest product of Kidder engineering in the field of color printing. Do you know about other recent developments? A letter outlining the type of work you do will bring you all the facts.

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One and Two-Sheet Rotaries . . . All Size Adjustables . . . Automatic Bed and Platen Presses . . . Golden Arrow Straight-Line Bronzer . . . Multi-Color Web Presses . . . Slitters and Rewinders . . . Chapman Electric Neutralizer . . . Special Printing Machinery of All Kinds. 927

Matrix Detector Signals Operator

On Line-casting Machine If There Are Matrices On Distributor Bar Before Shifting Magazines — Other Patents

DECEMBER-JANUARY

Bookbinding:

1,982,743. WIRE STITCHING OR STAPLING MACHINE. Oscar Kleinschmit and Karl Kuzler, Leipzig-Plagwitz, Germany, assignor to Gebruder Brehmer, Leipzig-Plagwitz, Germany, a German firm. Application March 1, 1933. Serial No. 659,214. In Germany March 1, 1932. 23 Claims. (Cl. 1—2.)

1. In a wire stitching or stapling machine the provision of staple forming and driving members each of which is divided, the divisions being arranged in oppositely disposed groups and adapted to be displaced relatively to each other to vary the size of the staple inserted into the work.

1,928,880 AUTOMATIC BOOK CUTTING MACHINE. Peter T. Pachter, Chicago, Ill. Application February 15, 1932. Serial No. 592,932. 7 Claims. (Cl. 164—51.)

1. In a booklet trimming machine, the combination with a suitable conveyor system to carry the booklets through the machine, of suitable movable stops for stopping the booklets under the shear, automatic means for lowering the stops to permit the forward movement of the booklets, a spring actuated clamp for holding the booklets firmly beneath the shear, a reciprocating shear for cutting the front edge of the booklet, header up means for shifting the booklets into the path of circular cutters, the means being adjustable and slidably mounted and rotating circular cutters for trimming the ends of the booklets.

Composing Machinery:

1,981,519. PRINTING DEVICE. William H. Macdonald, Passaic, N. J. Application February 7, 1933. Serial No. 655,569. 44 Claims. (Cl. 101—93.)

1. A printing machine having a pair of aligned stacks of type carriers forming a type-storage magazine and a type-receiving magazine respectively, each type carrier having parallel channels adapted to receive rows of type, means for selectively advancing the rows of type in the various channels from the type-storage magazine into the type-receiving magazine, means for separating the type-receiving magazine from the type-storage magazine to expose the faces of certain type in one of the magazines, and printing means cooperating with the exposed type faces.

1,981,835. SPACEBAND FOR JUSTIFYING MATRIX LINES. Herman R. Freund, Brooklyn, N. Y., assignor to Intertype Corporation, Brooklyn, N. Y., a corporation of New York. Application March 3, 1934. Serial No. 713,912. 8 Claims. (Cl. 199—68.)

1. A spaceband comprising connected relatively movable short and long members presenting parallel outer faces and adapted for insertion between adjacent matrices having parallel faces and ears projecting from their sides at the top and bottom in the plane of one of their faces, the short member having ears corresponding to the ears at the tops of the matrices, the ears being beveled to facilitate the insertion of the spacebands between the parallel faces of adjacent matrices.

1,981,845. TYPOGRAPHICAL MACHINE. Leo M. Chapman, Chicago, Ill. Application July 7, 1932. Serial No. 621,171. 18 Claims. (Cl. 199—52.)

1. A typographical machine including means for presenting assembled matrices in front of a mold, a mold, mold disk and slide, a power-driven cam, a bell-crank clutch operating lever, a mold slide actuating lever, and means carried by the slide actuating lever to move means carried by the bell-crank clutch operating lever into engagement with means on the power-driven cam thereby causing the power-driven cam means to actuate the bell-crank clutch operating lever to stop the machine.

1,982,033. TYPOGRAPHICAL CASTING MACHINE. Anthony Joseph Stouges, Queens Village, N. Y., assignor to Mergenthaler Linotype Company, a corporation of New York. Application September 24, 1932. Serial No. 634,636. 48 Claims. (Cl. 199—54.)

1. In a typographical casting machine, the combination of a slug casting mold, and a power-driven rotary cutter for automatically trimming the printing faces of slugs cast in the mold.

1,983,501. MATRIX MAGAZINE FOR TYPOGRAPHICAL MACHINES. Richard E. Sylte, Chicago, Ill., assignor to Intertype Corporation, Brooklyn, N. Y., a corporation of New York. Application February 7, 1934. Serial No. 710,143. In Germany November 11, 1933. 14 Claims. (Cl. 199—44.)

1. In a matrix magazine for typographical machines comprising a matrix guiding section and a section to receive and hold matrices from the guiding section, an exchangeable magazine section movable into and out of a position to enable matrix holding sections of different lengths to be used.

1,983,524. MAGAZINE-CHANGING DEVICE FOR TYPOGRAPHICAL COMPOSING AND DISTRIBUTING MACHINES. Christian Augustus Albrecht, Berlin, Germany, assignor to Mergenthaler Linotype Company, Brooklyn, N. Y., a company of New York. Application June 24, 1933. Serial No. 677,432. In Germany September 10, 1932. 6 Claims. (Cl. 199—33.)

1. In a typographical composing and distributing machine, the combination of distributing mechanism, a plurality of magazines, magazine-shifting means adapted to bring different magazines alternatively into operative relationship with the distributing mechanism, a normally inactive ejectrically-operated signalling device adapted to indicate the presence of matrices in the distributing mechanism and a switch operable conjointly with the magazine-shifting means to render the signalling device active.

Printed Copies of Patents Are Furnished by the Patent Office at 10 Cents Each. These May Be Obtained by Addressing the Commissioner of Patents, at Washington, D. C.

1,983,633 TYPOGRAPHICAL COMPOSING MACHINE. William J. Mulroy, Woodhaven, N. Y., assignor to Mergenthaler Linotype Company, a corporation of New York. Application June 1, 1933. Serial No. 673,826. 11 Claims. (Cl. 199 — 18.)

1. In a typographical machine, the combination of two magazines arranged side by side or in tandem, and each provided with escapements, two sets of escapement actuating devices, one for each magazine, two corresponding independent sets of power-driven elements for operating the devices, a keyboard, mechanical connections between the finger keys of the keyboard and one set of power-driven elements, electrical connections between certain selected finger keys of the keyboard and the other set of power-driven elements, and means for shifting the control of the selected finger keys to either set of power-driven elements as required.

1,983,913. METHOD OF AND MACHINE FOR CASTING TYPE PATRICES. Paul Marti, Winterthur, Switzerland, assignor to the firm Schweiz, Lokomotiv & Maschinenfabrik, Winterthur, Switzerland. Application December 14, 1933. Serial No. 702,397. In Switzerland December 24, 1932. 3 Claims. (Cl. 199 — 47.)

1. Process for producing individual setting machine patrices comprising moving a carrier plate provided with restoring cams to a casting position and into a mold, casting a patrice on the carrier plate, removing the patrice from the mold, and carrying the patrice to a collection point.

Paper Cutting Machinery:

1,981,063. SAFETY DEVICE FOR PAPER CUTTERS. Andrew T. Moyer, Jenkintown, Pa. Application December 15, 1933. Serial No. 702,469. 4 Claims. (Cl. 74 — 615.)

1. In a device, a machine having an element which moves vertically and horizontally during an operating stroke, guides at the sides of the machine, a buffer bar slidably mounted in the guides, another guide mounted on the element for movement therewith, a carriage operatively mounted in the last named guide, a forked lever pivoted to the carriage, pivoted bell crank levers having portions pivotally connected with the arms of the forked lever, and links pivoted to the bell crank levers and the buffer bar.

Plate Making Machinery:

1,982,756. MATRIX ROASTER. Oscar Charles Roesen, Brooklyn, N. Y., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a corporation of New York. Original application September 2, 1926. Serial No. 133,161. Divided and this application October 2, 1930. Serial No. 485,913. 3 Claims. (Cl. 34 — 12.)

1. In a flexible matrix roaster, the combination with a curved roasting oven and means for supplying it with heat, of a conveyor for the matrices having a series of rests oppositely located and curved for holding the opposite ends of the matrices so that the matrices will be held in curved condition with their centers out of contact woth the elements of the conveyor to allow free circulation of heated air against the concave surfaces.

1,982,967. PRINTING ELEMENT AND PROCESS OF MAKING SAME. Benjamin L. Sites, Chicago, Ill., assignor to The Miehle Printing Press & Mfg. Company, Chicago, Ill., a corporation of Illinois. Application October 9, 1931. Serial No. 567,776. 5 Claims. (Cl. 95 — 5.6.)

5. The process of making intaglio printing elements, consisting in providing a metal base with ink-retaining cells of substantially uniform depth, applying a photographic emulsion to the cells, drying and shrinking the emulsion, exposing the emulsion through a photographic transparency, developing the exposed emulsion to produce varying thickness in the cells in proportion to the exposure received, and swelling and drying the emulsion in the cells.

1,983,438. ROUTING MACHINE. Abe Lincoln Cushman, Concord, N. H. Application November 9, 1932. Serial No. 641,845. 2 Claims. (Cl. 90 — 15.)

1. In a routing machine of the type having a work rest and a supporting member universally movable in a fixed plane relative to the rest, an operating mechanism comprising a bracket fixed to the supporting member and having means defining a slideway, guide members movable in the slideway toward and away from the work rest, an electric motor supported by the guide members and movable longitudinally of the slideway, a screw shaft associated with the guide members and bracket for moving the motor toward or away from the work rest, an elongate driving spindle offset relative to the shaft of the motor and journaled adjacent to its ends in bearings secured to the casing of the motor, a rotary tool holder secured to the spindle, and transmission mechanism connected to the motor shaft and spindle for driving the latter at an increased speed relative to the motor shaft.

1,983,814. DRIVE OF MACHINES FOR CASTING STEREOTYPE PLATES. Karl Schaeflein, Bern, Switzerland. Application October 24, 1932. Serial No. 639,311. In Germany November 6, 1931. 4 Claims. (Cl. 22 — 2.)

4. In a stereotype plate-casting machine, the combination of a melting pot having a valved outlet leading therefrom, a mold adapted for movement toward and away from the valved outlet, rotary actuated cam means having two operative cam surfaces, a toothed segment provided with means operatively associated with the cam surfaces for oscillating the segment, a connection between the segment and the valved outlet, a second toothed segment in mesh with the first toothed segment and a connection between the second segment and the mold.

Printing Presses:

1,981,912. PRINTING PRESS. Harland Fankboner, Chicago, Ill., assignor to The Goss Printing Press Company, Chicago, Ill., a corporation of Illinois. Application March 10, 1932. Serial No. 597,975. 19 Claims. (Cl. 101 — 350.)

1. The method of controlling the amount of ink supplied from an ink fountain which includes coating a moving surface with a film of ink, periodically removing all of the film from a portion of the surface, transferring ink to an ink train from a portion of the surface and varying the position of the removed film to vary the amount of ink transferred.

5. An inking mechanism for printing presses including in combination a fountain roller, an ink drum and transfer means for transferring ink from the fountain roller to the drum and means for intermittently and completely removing ink from a longitudinal portion of the roller.

1,982,574. MULTICOLOR PRINTING PRESS. Paul F. Cox, Chicago, Ill. Application January 16, 1934. Serial No. 706,876. 25 Claims. (Cl. 101 — 186.)

1. A printing press having a type bed, and a plurality of orbitally moving impression cylinders cooperating with the type bed.

1,982,703. FORMER FOR PRINTING MACHINES. William J. Strain, Upper Montclair, N. J., assignor to R. Hoe & Co., Inc., New York, N. Y., a corporation of New York; Irving Trust Company, temporary trustee. Application April 20, 1932. Serial No. 606,383. 14 Claims. (Cl. 270 — 86.)

1. A former for a running web, the former being equipped with a flexible nose portion, and means for adjusting the curvature of the nose portion.

1,982,757. PRINTING PLATE CLAMP OPERATING MEANS. Oscar Charles Roesen, Brooklyn, N. Y., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a corporation of Virginia. Application December 18, 1930. Serial No. 503,208. 9 Claims. (Cl. 101 — 378.)

1. In a device for operating a plate clamp on a cylinder of a printing press, the combination of a rod mounted on the frame of the press, power-operated mean!for moving the rod longitudinally toward and from the cylinder and means supported by the cylinder and separate from the clamp adapted to be engaged by the rod for withdrawing the plate clamp.

1,982,823. SHEET FEEDING MACHINE. Ross Meredith, Pearl River, N. Y., assignor to Dexter Folder Company, New York., a corporation of New York. Application July 30, 1932. Serial No. 626,906. 94 Claims. (Cl. 271 — 12.)

1. In an apparatus a mechanism for supporting and advancing a supply of sheets standing on edge one behind another, means forwardly of and above the mechanism and to which sheets are fed one after another, sheet conveying means for delivering the sheets upwardly and forwardly to the first named means, and means movable toward and away from the front of the supply for separating the sheets successively therefrom and delivering them in like manner to the sheet conveying means.

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For uniformly good results in 1935, resolve to demand metal that is of sure fire dependability. Engravers everywhere are realizing that the electric induction process used exclusively in the production of Zomo Electric Zinc and A-Z Alloy, absolutely guarantees uniform results.

For best results, specify Zomo Electric Zinc for all regular work, and A-Z Alloy for long runs and heavy mat duty. You can order both of these metals from any of the following: Rolled Plate Metal Co., National Steel & Copper Plate Co., Pacific Steel and Copper Plate Co., C. G. Hussey & Co., W. E. Booth Co., Ltd., Canada; Hunter Penrose, Ltd., England.

1,982,830. INKING MECHANISM. Charles J. Richter, Berwyn, Ill., assignor to Goss Printing Press Company, a corporation of Illinois. Application March 31, 1932. Serial No. 602,139. 12 Claims. (Cl. 101 — 351.)

1. An inking mechanism including in combination a plurality of sectional transfer rollers to be contacted with a fountain roller and an ink drum to transfer ink from one to the other, all of the rollers being arranged end to end and means at one side of the mechanism for moving the rollers individually toward and away from the fountain roller and drum whereby different sizes of rollers may be mounted for simultaneous contact with the fountain roller or ink drum.

1,983,012. NUMBERING MACHINE. Peter Aitchison, New Rochelle, N. Y., assignor to American Bank Note Company, New York, N. Y., a corporation of New York. Application August 8, 1933. Serial No. 684,281. 10 Claims. (Cl. 101 — 76.)

1. A numbering machine embodying therein a printing couple consisting of a numbering head cylinder, and an impression cylinder, parallel shafts adjacent the members of the printing couple, one of the shafts having thereon a circular female perforating die, and the other shaft having a circular male perforating die cooperating with the female die, sheet receiving means adjacent the perforating dies, an endless tape passing about the impression cylinder and over the female perforating die, and guide rollers for the tapes positioned beyond the perforating dies, whereby a sheet of paper is caused to pass from the dies to the sheet receiving means and is held against the female perforating die during the perforating operation.

1,983,115. INK FOUNTAIN FOR PRINTING PRESSES. Otto R. Wolf, Oak Park, Ill., assignor to The Tribune Company, Chicago, Ill., a corporation of Illinois. Application May 31, 1932. Serial No. 614,383. 3 Claims. (Cl. 101 — 365.)

1. An ink fountain for printing presses comprising an ink trough, a fountain roller journalled therein, a scraper knife adjustable from the end of the fountain, a knife-supporting and adjusting assembly pivotally mounted above the trough, the assembly being adapted to be swung on its pivots away from the trough when desired to afford ready access to the interior of the trough, and means for accurately relocating the assembly when returned to normal position to thereby cause the knife to assume an exact predetermined relationship to the roller.

1,983,126. PRESS ROLL DRIVE. John J. Farrell, Downingtown, Pa., assignor to Downingtown Manufacturing Company, Downingtown, Pa., a corporation of Pennsylvania. Application September 21, 1933. Serial No. 690,493. 20 Claims. (Cl. 92 — 49.)

1. In an apparatus, a pair of rolls, a drive shaft for each roll, means to drive one of the shafts, a gradually variable speed driving connection between the shafts, and means controlled by relative peripheral speeds of the rolls for varying the speed of rotation of the shaft driven through the driving connection.

1,983,352. PRINTER'S BLANKET AND METHOD OF MAKING. Theodore T. Ellis, Worcester, Mass., assignor to New England Fibre Blanket Company, Worcester, Mass., a corporation of Massachusetts. Application May 16, 1930. Serial No. 452,960. 32 Claims. (Cl. 154 — 54.5.)

6. A woolen felt blanket for use on the impression cylinder of a newspaper printing press, comprising the product of a loosely woven construction of loosely twisted woolen yarns after being fulled to substantially increased thickness and compressed to a thickness intermediate the woven and fulled thicknesses, and containing binding material which is flexible, moisture resistant and substantially permanent after drying and maintains the blanket in its compressed condition with capacity for further compression and elastic rebound therefrom.

1,983,610. INKING MECHANISM FOR PRINTING PRESSES. Hans Irmscher, New York, N. Y., assignor to Millie Patent Holding Co., Inc., New York, N. Y., a corporation of New York. Original application September 23, 1931. Serial No. 564,615. Divided and this application June 28, 1932. Serial No. 619,684. 4 Claims. (Cl. 101 — 340.)

1. A printing machine comprising a frame, a carrier on the frame, an inking roller rotatably associated with the carrier, the carrier being formed with a recess forming an ink well-a bottom plate in the well, a feed roller in the well, means to advance the bottom plate against the feed roller, and means to limit the movement of the bottom plate toward the feed roller.

1,983,948. PRINTING PRESS FOR PRINTING WAX CARBON SPOTS ON SHEETS OF PAPER. George A. Rutkoskie, Athens, Ohio, assignor to The McBee Company, Athens, Ohio, a corporation of Ohio. Application October 26, 1934. Serial No. 750,031. 7 Claims. (Cl. 101 — 345.)

1. In a printing press for printing spots of wax carbon on sheets of paper, an inking mechanism including a reciprocating ink plate, a rack movable with the ink plate, a form inking roller, and a vibrator roller, a train of gearing including a gear driven by the rack and a gear on the vibrator roller and the form inking roller for positively driving the form inking roller when it contacts and during its contact with the ink plate and the form.

1,983,987. AUXILIARY COLOR FOUNTAIN FOR WEB PRINTING PRESSES. William J. Morrison, Lakewood, and Grover C. Spicer, Lyndhurst Village, Ohio, assignors to The Cleveland Company, Cleveland, Ohio, a corporation of Ohio. Application October 31, 1933. Serial No. 696,052. 8 Claims. (Cl. 101 — 351.)

1. The combination with a printing press having an ink rail movable into and out of ink supplying relation with the press of an auxiliary ink fountain mounted adjacent the press and adapted to supply ink to the press when the ink rail is out of ink-supplying relation with the press.

Miscellaneous:

1,980,587. COMPOSITOR'S COPY RACK. Ben E. Hayes, Jackson, Mich. Application December 21, 1933. Serial No. 703,497. 1 Claim. (Cl. 276 — 1.)

A compositor's copy rack, comprising a frame having a plurality of reinforcing members, laterally disposed crosswise, at any desired intervals, and two or more of the cross-members being located near the top of the frame and all of same being fixedly attached to the frame at points of contact therewith, and the corresponding ends of any two or more of the cross-members being extended beyond one outward vertical side of the frame and forming marginal reinforcements and supports to platelike members fixedly attached thereto so as to comprise rigid winglike attachments to the rack; and movably attached to the opposite, outward, vertical side of the frame, one or more similar winglike members comprising plates with marginal reinforcement rods extending lengthwise of the plates and beyond the same at one end thereof, the extended ends of the rods being turned around the side member of the frame so as to form a hingelike attachment between the movable winglike member and the rack frame, in such manner as to permit a backward and forward swinging movement of the movable member; and having fixedly mounted in pendant position upon the top of the rack frame, and upon any one or more of the frame cross-members, platelike members, and mounted upon the platelike members and upon the fixed and movable winglike members suitable means for holding in place upon the rack, printer's copy, dummy sheets, instruction sheets and other like printer's materials, as substantially set forth.

1,982,158. ROLL LEAF IMPRINTING MACHINE FOR LEATHER GOODS. Herman Gould, Brooklyn, and Frank Ackerman, Bronx, N. Y. Application March 11, 1932. Serial No. 598,166. 2 Claims. (Cl. 197 — 6.4.)

1. A roll leaf imprinting machine or the like comprising a base, a platen movable transversely to the base, imprinting means above the platen and movable downwardly in relation thereto, means for moving the platen after each imprinting operation, an imprinting ribbon extending across, carried by and movable with the platen so as to present a fresh portion of the ribbon to the imprinting means for each imprinting, the ribbon being disposed in spaced relation over the platen and adapted to be moved downwardly toward the platen when engaged by the imprinting means, and means for tensioning the ribbon to cause it to return to its position in normal spaced relation to the platen as the imprinting means is removed out of engagement therewith.

FRANK B. McKINNEY, PRESIDENT — WILL P. McKINNEY, SEC'Y-TREAS.

The Times Company, Inc.

Publishers of

The Marietta Daily Times

TELEPHONE 64 — 227 PUTNAM STREET

Marietta, Ohio

Oct.13th,
1 9 3 4.

Mr. Robert D. Berry, Sales Manager,
American Puolishers Supply,
P. O. Box 131,
West Lynn, Mass.

Dear Sir:

Your letter of October 10th received and it was shown by my secretary to Mr. Oliver, foreman of our press and stereotyping room, whom we consider the best man who has ever worked for us in this capacity. The Times does not hand bouquets to people unless we feel they are deserved, and Mr. Oliver's remarks are quoted verbatim as follows:-

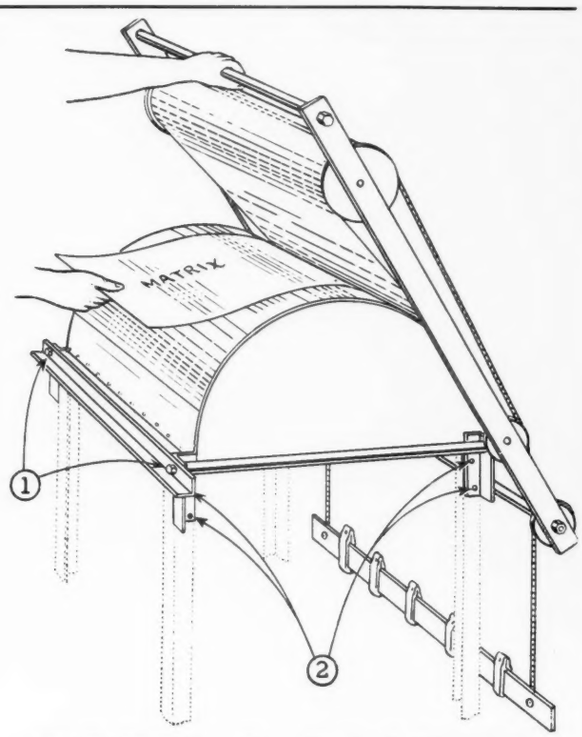
"The expenditure for this attachment is the most profitable and sensible that has ever been made in my department, for an equivalent amount of money.

"Technically speaking, it has eliminated a lot of mechanical difficulties we have had, such as poor forming and unequal drying. We have better scorched and better formed mats. It has about practically eliminated our buckle.

Very truly yours,

THE TIMES COMPANY
Will P. McKinney
Will P. McKinney, Manager

WPMcK:S



FORM-O-SCORCH

Self-Conforming Cover, with Adjustable Tension for Speed Scorchers

WRITE FOR DETAILS

American Publishers Supply

P. O. BOX 131 — WEST LYNN, MASSACHUSETTS

When To Discard Matrices

From time to time *Printing* Equipment *Engineer* receives inquiries relative to causes for imperfect letter alignment and distributor stops caused by worn line-casting matrix lugs. A matrix can be retained in use over too long a period of time. There is no way to determine when a matrix has outlived its normal life expectancy except to state that, being in otherwise good shape with relation to the side walls, combination teeth, etc., a matrix should be discarded when the lower lugs have become worn from 0.020 in. to 0.025 in. measured across the outer vertical extremities of the lower lugs. Lower case "e," "t," "a," "o," "i," "n," "s," "d," etc., will be among the first characters to show wear on the lower front and back lugs.

In the diagram is shown a matrix. The dimensions of a new matrix across the matrix lugs is approx. 0.750 in. The lower lugs receive more severe usage in circulating through the machine than do the upper lugs which are twice the length of the lower lugs.

As is stated above, when the lower matrix lugs have become worn from 0.020 in. to 0.025 in. lower than the original 0.750 in. measurement, as is shown in the diagram, the matrices should be discarded, especially if they cause clogs in the magazine and distributor channel entrances. At this point the lower end of the matrix will tip over sidewise because the lower front lug will not project high enough into the magazine entrance top channel plate channel to be sustained in an upright position.

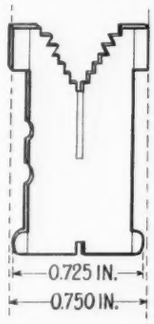
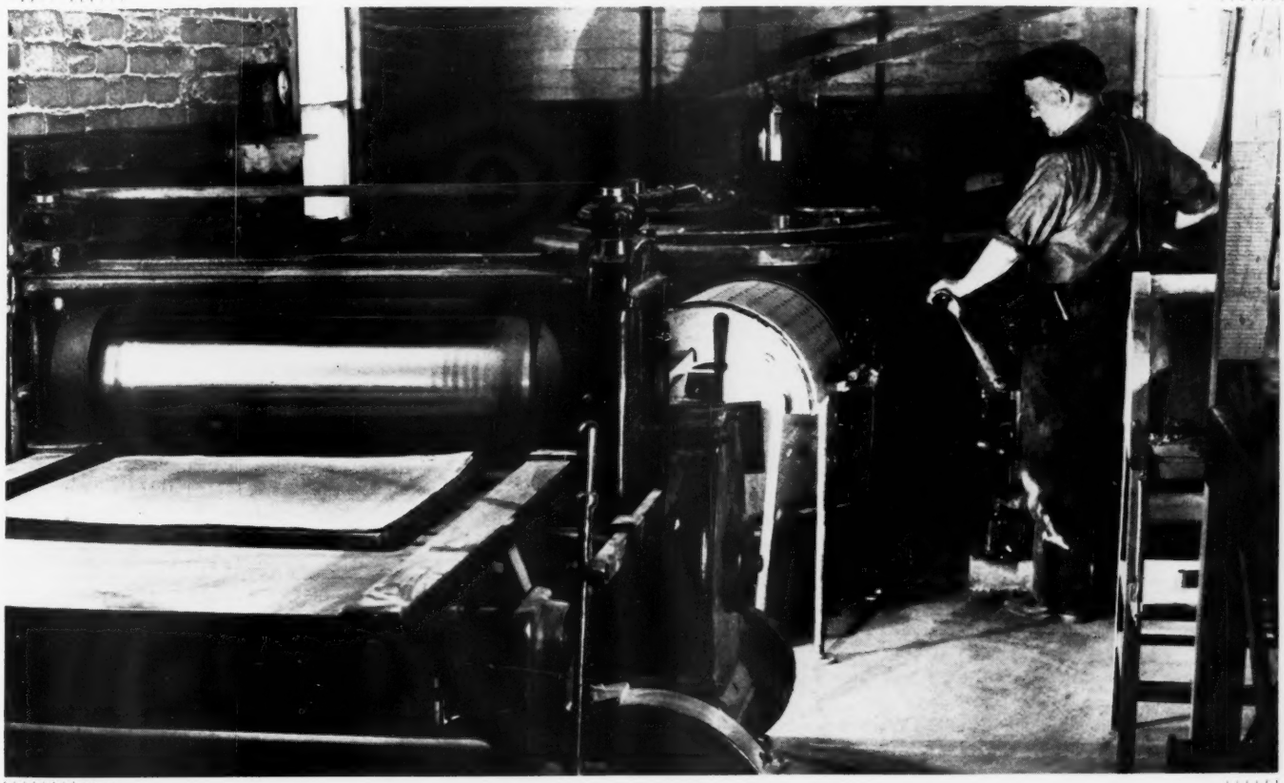


Diagram of line-casting machine matrix. When the lower lugs have become worn from 0.020 in to 0.025 in. the matrix should be discarded.

It is well to renew the lower case channels of matrices occasionally from "a" to "w" to preserve letter alignment and prevent clogs in the channel and magazine entrances.

The Picture Story of "Wood Dry Mats in the Making," No. 11



Giving Wood Dry Mats Practical Tests

THE experimental room in the Wood Flong plant is a typical foundry where mats are tested daily under the direction of an experienced stereotyper to assure Wood Dry Mat users of a uniformly high-grade product. Records are maintained of the molding quality of the mats, the speed in scorching, the release from the cast, the number of casts obtained, the shrinkage, etc. By means of such tests it is possible to keep an accurate check on dry mat quality.

WOOD DRY MATS
ALWAYS UNIFORM

WOOD FLONG CORPORATION
HOOSICK FALLS, N. Y.

A LETTER THAT SPEAKS FOR ITSELF!

Complete satisfaction — flexibility . . . economy . . . low maintenance . . . cooperation . . . and dependability are expressed in this splendid letter from Manz Corporation, Chicago, Illinois. What more can be said for genuine PMC Metal Bases than they measure up to the most critical requirements of printers who — appreciating the value of speedy lock-up . . . perfect register . . . and maximum pressroom efficiency — are specifying genuine PMC Metal Bases consistently.

Write for catalog and prices.

"WARNOCK" 4by4 METAL BLOCKS — "STERLING" TOGGLE BASES

THE PRINTING MACHINERY COMPANY
436 COMMERCIAL SQUARE · · · CINCINNATI, OHIO

461 Eighth Ave. New York, N. Y. · Canada: Toronto Type Foundry Co., Ltd., Toronto · Australia: Carmichael & Company, Sidney · England: Wm. J. Light & Co., London · Italy: D. G. Vigmini & Company, Milan · 90 West Jackson Blvd. Chicago, Illinois

For Metal Economy
Install MONOMELT

Double melting of type metal has always been wasteful, costly, inefficient. Bring your plant up-to-date — Install Monomelt., the modern system of single melting. Monomelt saves time, labor, cuts drossage, preserves metal, reduces down time, improves slug. Investigate Monomelt today. Mail coupon for booklet.

MONOMELT
The Single Melting System

MONOMELT CO., PE-1-A
1653 Polk St., N. E.,
Minneapolis, Minn.
Kindly send me, without obligation, your booklet ' Metal— A Study in Operating Economy" — also free literature on the Monomelt System.

Plant _____

Individual _____

Address _____

THANK YOU, VERY MUCH

September 12, 1934.

Printing Equipment Engineer,
Cleveland, Ohio.

Gentlemen: Your magazine has aided me very much in my work since the time I began reading it. I feel that I cannot get along without it.

BERNARDO N. NIGUIDULA,
T-V-T Publishing Corporation,
Manila, P. I.

Goodrich Elastotypes

The perfection of a new flexible printing plate was announced recently by The B. F. Goodrich Company. The new product, known as Goodrich Elastotype, is said to effect an appreciable reduction in makeready time; facilitates ink coverage; give brilliant coloring throughout the run, and prevents offsetting and premature plate wear.

Goodrich states that the successful performance of this product provides definite assurance that rubber plates may now be used in many new fields of printing.

. . Labels

(Continued from page 9)

remain slightly moist and so give the necessary adhesion between the label and the metal. This meant, however, that the nickel would, in effect, be in contact with a relative humidity in excess of 70 per cent which condition must be fulfilled before fogging can commence. Secondly, glassine paper, being translucent, will transmit light which it is known accelerates the rate of fogging.

"PHOTOGRAPHIC" EFFECT: The "photographic" reproduction of the label on the nickel article probably arose from the light acceleration effect. The black ink prevented light reaching the metal so that in those areas beneath the print the nickel had not fogged to the same extent and the printed characters appeared as bright nickel while the adjacent areas assumed the cream color which is characteristic of fogging.

The ink film may have retarded the fogging in other ways. The ink contained small traces of sulphides and these may have been transmitted through the label to the nickel and acted as an anti-catalyst. There is also the possibility that the volatile products of a drying ink film are anti-catalysts. These points, although of interest, have not been pursued since they did not appear to affect the case materially.

"FOGGING" REAGENTS IN THE LABEL: Since sulphur dioxide and sulphates are the root causes of fogging it was necessary to examine the paper, gum, and ink for traces of these materials and also for sulphides (or free sulphur) because of their inhibitory effect as anti-catalysts.

Glassine Paper: The paper was found to contain reducible sulphur which calculated as sulphur dioxide was present in the amount of 1.2 parts per million. Such sulphur probably arose from traces of sulphites or thio-sulphates. An examination was made for sulphides or free sulphur, but none were found.

The paper contained sulphates in appreciable quantities and its acid value was 0.23 milligrams of sulphur trioxide

SLIDE RULE FOR PRINTERS

★ **A Mechanical Instrument will enable you to find Short Cuts that will save you many valuable hours . .** *Write for information*

O'SULLIVAN LINOTYPE COMPOSITION CO.
LINO-TABLER SPECIALISTS
47 West Street - - - New York, N. Y.

per gram of paper. The sulphates and acidity probably arose from the alum used in manufacture. The acidity is not unduly high, but for papers which are to be used in contact with nickel goods the acidity should be as low as possible.

Gum: The gum on the back of the label was a dextrine product and was acidic, but since the acidity did not arise from sulphur acids it probably did not affect the fogging. The gum was free from sulphur dioxide, sulphates and sulphides.

Ink: The ink contained a small trace of sulphide, but was free from sulphur dioxide and sulphates.

Damping Solution: No sample of the actual damping solution was available for examination, but the possibility of its having contained small quantities of sulphur dioxide and sulphates cannot be dismissed.

The foregoing results indicate that sulphur dioxide and sulphates which were present in the paper were important factors in the fogging of the nickel articles, although their effect may have been augmented by atmospheric sulphur dioxide.

PRECAUTIONS FOR PREVENTING FOGGING

One of the major causes of fogging in this particular instance was the use of a water-glycerin containing adhesive. Its substitution by a non-aqueous adhesive would have been of assistance, but objections to its use could be raised on the grounds of inconvenience in use and cost. Moreover, if the nickel goods were placed in an atmosphere, the relative humidity of which was in excess of 70 per cent, the danger of fogging would still have existed.

It would also have been helpful to have used an opaque paper instead of the translucent glassine, but it was desirable to retain the original class of paper if possible. It was recommended, however, that future supplies of the glassine paper should be as free from sulphur dioxide and have as low an acidity and sulphate content as possible. It is not practicable to produce a commercial paper which is *entirely free* from sulphur, but the amounts present be as small as possible.

The simplest method of preventing the fogging in this instance appeared to be to apply a thin film of lanoline to the nickel article prior to attaching the label by wiping the metal with a cloth containing lanoline and then gently polishing with a clean cloth. In this way a film of lanoline could be applied, sufficiently thin not to interfere with the adhesion of the label but stick enough to give the necessary protection.

PRINTED MATTER FOR NICKEL ARTICLES

In the special case described conditions were unusually favorable for the fogging of nickel and it is unlikely that more severe conditions would occur in practice, but it is worthy of note by printers and paper makers supplying printed matter or paper which is likely to come into contact with nickel articles that traces of materials which may give rise to sulphur dioxide should be avoided *so far as is possible* and that the paper should have a low acidity and should be as free from sulphates as is feasible. It is emphasized that it is impossible to produce a normal commercial paper which is *entirely* free from sulphur, but it is believed that the amount present, if normal precautions are taken, will not affect nickel goods under normal conditions.

New—Different—Not "Just Another" CASTING BOX

Ask about New Hammond EasyKaster

HAMMOND MACHINERY BUILDERS
1615 DOUGLAS KALAMAZOO, MICHIGAN

BURGESS CHROME MATS

TO OUR FRIENDS AND CUSTOMERS

●

Our sales of mats during Nineteen-Thirty-four have been the largest in our history.

We believe that our success has been due, not only to the quality product furnished, but to the whole-hearted confidence we have endeavored to create.

We believe that our relations with our customers rest on the bed-rock of confidence. We rejoice in their success as we do in our own.

Therefore, at this Holiday Season, it is fitting that we extend the hand of good fellowship to our customers. We would like you to consider this as a hearty handclasp, while we wish you in all sincerity, a Happy, Prosperous New Year.

●

BURGESS CELLULOSE COMPANY
FREEPORT, ILLINOIS

CHROME MATS
A Laboratory Product
A 207

Pacific Coast Representative, RALPH LEBER,
426 Polson Bldg., Seattle, Washington

BURGESS CHROME MATS

BURGESS CHROME MATS

BURGESS CHROME MATS

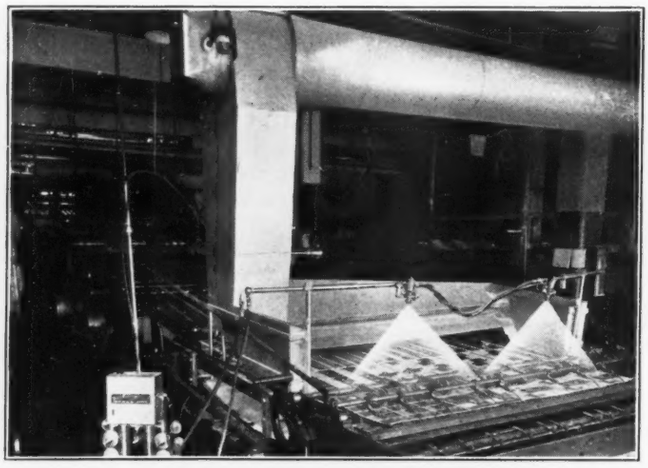
Linotype Memphis Family Growing

Nine-point Memphis Bold with Memphis Light is the latest addition to the Linotype Memphis series, now available in both weights in the 6, 8, 9, 10, 12, 14, 18, 24, 30 and 36-point sizes for keyboard Linotypes, and up to and including 144 point for the All-Purpose Linotype.

Є К М П Ш
Є К М П Ш

Alternative Caps for both weights of Memphis

Memphis Bold with Italic and Memphis Light with Italic, now being cut in a full range of sizes, are available in the 10 and 14-point sizes.



Above press, Paasche equipped, resulted in substantial savings and higher class of work

Paasche "No-Offset" Process

PROTECT your printed impressions against all possibility of smudging or ink offset . . . do away with all need for slip sheeting, racking, or thinning inks — by equipping your presses for the Paasche "No-Offset" Process. Cost records show yearly savings of over $3,000.00 per press equipped. Over a hundred concerns installed the process last year.

Write today for booklet describing the operation, advantages and economies of the Paasche "No-Offset" Process, available for most types of presses.

Paasche Airbrush Co.
1931 DIVERSEY PARKWAY CHICAGO

Equipment and Technical Literature for Mechanical Executives

Readers of *Printing* EQUIPMENT *Engineer* who are interested, may secure any of the Books, Catalogs or Bulletins listed below by checking the literature desired in the square opposite the title. Mark carefully only that literature which you wish to receive. Fill out the coupon and send it to us. The literature will be forwarded gratis except where noted.

☐ *Accurately Finished Rollers*—Illustrated folder describing rubber roller refinishing equipment.

☐ *Accurate Impression Adjustment*—Illustrated leaflet on a dial impression gauge which is used for gauging the distance between printing press cylinders, to determine whether impression is right.

☐ *Stymie Family*—Folder showing specimen lines of four members of Stymie Family for typesetting and type-casting on the Monotype. Showing includes the new Extrabold in various sizes. The folder may be obtained direct from the Monotype Company or we will be glad to have it sent to you.

☐ *Power Page Proof Presses*—Folder, illustrated, showing detail views of presses together with descriptive matter about the purposes for which the presses are built.

☐ *1935 Printing Equipment and Supplies Catalog Number, Printing* EQUIPMENT *Engineer*—Contains Manufacturers' and Products Index of printing equipment and supplies, besides advertisements written especially for this issue. Sent upon receipt of 35c to cover charges.

☐ *Hydraulic Matrix Press*—For Job, Magazine, Newspaper, and Lead Moulding. Illustrated bulletin presents technical information in detail.

☐ *Process Embossing*—Illustrated booklet showing various sizes of equipment. Specimens of work done on these machines is also included.

☐ *Corinco Bulletin*—Illustrating and describing isolation corkboard for the control of noise and vibration in connection with the use of printing machinery.

☐ *Circular Saw Grinder*—Illustrated bulletin relating to automatic machine for grinding all kinds of hard or soft printers' metal-cutting saws.

☐ *Improved Automatic Distributor Signal*—Leaflet describing light signal notifying machinist when distributor stop occurs.

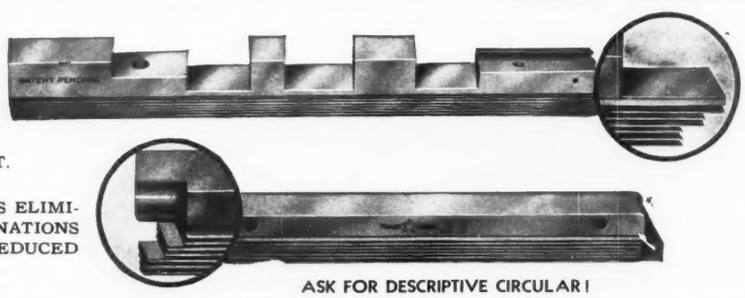
☐ *Bulletin*—Descriptive of motor-operated stereotype cutter grinder with slide and indexing device.

THESE BARS WILL SAVE YOUR DOLLARS!

ENDS HAVE ONLY *THREE* STEPS INSTEAD OF CUSTOMARY SEVEN.

ENDS OF BOTH BARS ARE *TAPERED* SO THAT EDGES ARE SECURE FROM CONTACT.

DAMAGE TO ENDS OF BARS IS ELIMINATED. MATRICE COMBINATIONS WEAR CONSIDERABLY REDUCED THROUGH *CLOSER LOCK-UP.*



BAR POINT CHANGED MERELY BY REMOVING SCREW.

ASK FOR DESCRIPTIVE CIRCULAR!

REMEMBER --- ACE CORD-RUBBER BELTS ARE GUARANTEED FOR MINIMUM OF YEAR'S SERVICE!

LINOTYPE PARTS CORPORATION • NEW YORK, 203 LAFAYETTE STREET KANSAS CITY, 314 WEST 10th STREET

AGENCIES — CHICAGO, 318 WEST RANDOLPH STREET — LOS ANGELES, 1520 GEORGIA STREET

☐ *Perfect Balance Without Vibration*—Bulletin which shows how wasted power and destructive energy may be withdrawn from the process of modern newspaper production. This is No. 4 of a series of six bulletins dealing with high-speed newspaper presses.

☐ *New Model Test Presses*—Illustrated Bulletin descriptive of heavy-duty precision test presses which in addition to precision and impressional strength are equipped with motor-driven detachable inkers.

Printing Equipment Engineer,
1370 Ontario St., Cleveland, Ohio.

Gentlemen: Please send the literature checked above without obligation.

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Attention of_____

Position_____ **Dept.**_____

Street Address_____

City_____ **State**_____

A.I.G.A. Educational Program

The American Institute of Graphic Arts, in addition to its regular program, has assumed sponsorship of the organized program of printing education formerly conducted by the United Typothetae of America and is broadening it into a more general program of Graphic Arts Education. General subdivisions of the general educational program are as follows:

Prevocational study for selection and guidance of future workers.

Vocational or trade training in the technical divisions of the Grahpic Arts.

Technical or college training for engineering and executive positions.

Training of teachers for the Graphic Arts in normal schools and colleges.

Continuation and part-time instruction for workers in the industries.

Cultural teaching in Graphic Arts appreciation for every young person.

In order to carry on this work, however, financial support is being requested from the Graphic Arts Industry in general. Memberships in the Institute are broken down into five membership classifications, as follows: Active, School, Contributing, Sustaining and Life. The appeals are being made for contributions ranging from $1 up. A paragraph from a bulletin reads as follows:

Admission to Active Membership in the American Institute of Graphic Arts is conferred only upon those who are actively engaged in the field of Graphic Arts, or upon those who are known to have an interest in one or more of the Graphic Arts, to insure that their membership shall be, first, a source of stimulus and intellectual profit to themselves, and, second, an aid, through the Institute, to the advancement of the Graphic Arts.

Active membership dues are $15 a year, with no initiation fee, payable in January, or, if particularly desired, quarterly payments may be made."

Full information may be obtained from the Executive Secretary, Grand Central Palace Building, 125 East 46th St., New York, New York.

Harry L. Gage is president of the A. I. G. A.; Fred J. Hartman, Director of Education, and Harry Hillman is Publication Manager, Division of Education.

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Complete Stock for All Motor Drive, Obsolete Drive, etc.
Any Kind of Pinions Made Per Sample
WILLIAM REID & CO.
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Cut Your Makeready

by getting accurate blocks with this precision planer, the Hacker Block Leveller.

Blocked plates are the greatest single cause of press makeready because they are not level or type-high.

But printers with this new planer have licked that problem. Their cuts are level and type-high. They make sure of that before the cuts go to press.

This new bench model No. 3 Hacker Block Leveller is a finely built tool made especially for this work. Send for catalog.

Hacker Manufacturing Company
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LIFE — INSURANCE
for TYPE and CUTS

The low moulding pressure at which they *always* give deep, sharp, accurate impressions, is one of the many money-saving features of . .

MORLEY MATS

They are mill-conditioned to give just the required shrink . . .

They release easily; without use of oil or powder . . .

They scorch quickly . . .

All good reasons why you should use them in your stereotyping room.

Samples on request.

MORLEY BUTTON MANUFACTURING CO.
PORTSMOUTH, NEW HAMPSHIRE
***New York Office*, 46 East 11th Street**

Just a Love Letter

Of the many Linecasting Machine Accessories marketed during recent years, none have been received with such acclaim as Ace Cord-Rubber Belts. Starting from "scratch" a few short years ago, we have, during the worst business depression in history, built our volume to such proportions that we now supply most of the Linecasting Machine Belts in use today. Herbert Cummings, progressive machinist of the *Post-Tribune*, Gary, Indiana, was one of our first, and still is, numbered among out best customers. His "love letter" makes interesting reading:

"The Ace Assembler Drive and Mohr Saw Belts have not given us one bit of trouble during the first year we have used them . . . the belts are as good today as when first installed . . Our Mohr Saw Belts have proved that while certain parts must be removed to apply them, in the end it pays many times over . . . Too much praise cannot be given your belting, and we are glad to recommend it to anyone."

Modernize Your Typesetting Machines by Installing

ACE Round and Flat BELTS

available for Main Drive, Distributor, Keyboard, Pi Stacker, Assembler Drive and Matrix Delivery. They are guaranteed for a minimum of one year and cost no more than leather. Send for price list.

ACE LINOTYPE ANGLE DRIVE CONVERTER
makes a direct drive of your obsolete Part D-1945.
Price complete, with belt, $6.95 — Sent on Free Trial.

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TINGUE PRESS BLANKETS
FELT Coating by Dupont

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TINGUE, BROWN & CO.

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TESCH SAW SWAGER

The only SWAGER built for the Graphic Arts. Accurately SWAGES more than 100 teeth a minute. Also makers of the

TESCH SAW FILER

Write
TESCH MFG. CO.
2850 South 20th Street
Milwaukee, Wis.

Metallic Ink Used On Newspaper Supplement

On November 23 the *Chicago Drovers Journal* issued a special 16-page tabloid section. An innovation was the use of metallic ink (gold) in printing the cover design.

R. B. Singer, sales manager for the *Drovers Journal*, states that the use of metallic ink was undertaken without preliminary trial, the idea for the cover design having been conceived just soon enough to allow time for the art work and photo-engraving to be produced in time to meet stereotyping and press schedules. No difficulties were encountered since the ink was manufactured to meet the requirements of press speed which was held down to about 20,000 and the paper stock which was a 35-pound halftone news.

The ink was placed in a regular undershot color fountain. At the outset the ink started to spray somewhat, but this was overcome by the addition of a special varnish. The ink set rapidly enough to prevent any trouble with offset. Occasional washups prevented "piling" on the plates.

Our January Advertisers

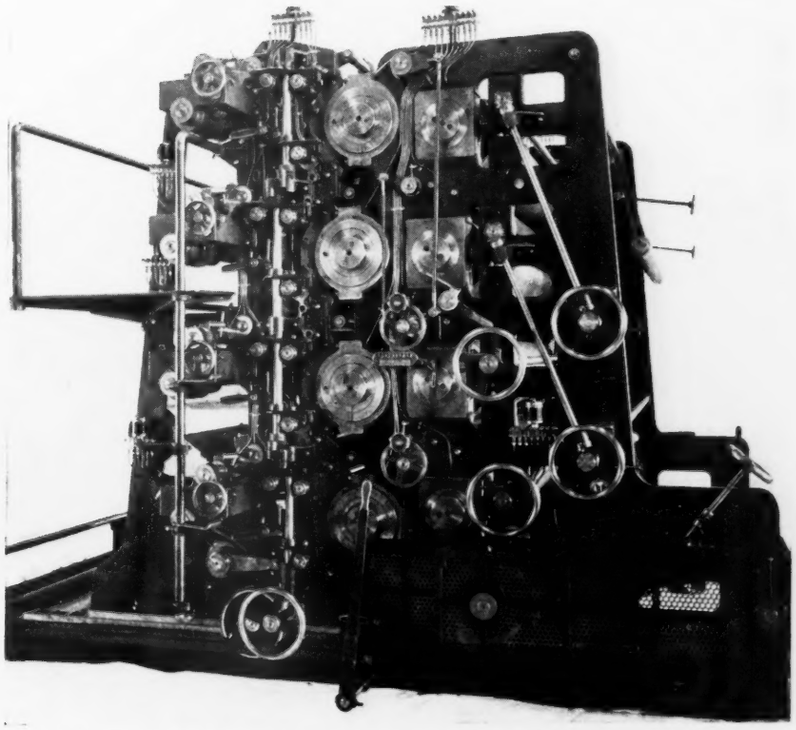
	Page
ACE BELTING COMPANY	38
AMERICAN PUBLISHERS SUPPLY	32
ATLANTIC ZINC WORKS	31
BOOTH, E. A., RUBBER COMPANY	25
BURGESS CELLULOSE COMPANY *Agency:* Fred A. Robbins, Inc., Chicago, Ill.	35
CERTIFIED DRY MAT CORPORATION *Agency:* The Henry P. Boynton Advertising Agency, Cleveland, Ohio.	28
CHALLENGE MACHINERY COMPANY	17
DUPLEX PRINTNG PRESS COMPANY, THE	19
DUSTLESS EQUIPMENT COMPANY	16
EDES MANUFACTURING COMPANY, THE *Agency:* The Calloway Associates, Inc., Boston, Mass.	25
GENERAL ELECTRIC COMPANY	21
GOSS PRINTING PRESS COMPANY *Agency:* Simmonds & Simmonds, Inc., Chicago, Ill.	Inside Front Cover
HACKER MANUFACTURING COMPANY	37
HUBER, J. M., INC. *Agency:* Grant, Wadsworth & Casmir, Inc.	4
IMPERIAL TYPE METAL COMPANY *Agency:* The Henry P. Boynton Advertising Agency, Cleveland, Ohio.	22
INTERTYPE CORPORATION *Agency:* Fred Glen Small, Inc., New York, N. Y.	Outside Back Cover
KEMP, C. M., MANUFACTURING COMPANY *Agency:* The Robert N. Taylor Company, Washington, D. C.	18
KIDDER U.P.M., PRESS CO., INC. *Agency:* James Thomas Chirurg Co., Boston, Mass.	30
LINOTYPE PARTS CORPORATION	36
LUBLOW TYPOGRAPH COMPANY *Agency:* Schwimmer & Scott, Chicago, Ill.	20
MATRIX CONTRAST CORPORATION	6
MERGENTHALER LINOTYPE COMPANY *Agency:* Kenyon & Eckhardt, Inc., New York, N. Y.	11
MORLEY BUTTON MANUFACTURING COMPANY *Agency:* Chambers & Wiswell, Inc., Boston, Mass.	37
PAASCHE AIR BRUSH COMPANY *Agency:* Lauesen & Salomon, Chicago, Ill.	35
PRINTING EQUIPMENT ENGINEER	29
PRINTING MACHINERY COMPANY, THE *Agency:* The Jay H. Maish Company, Marion, Ohio.	34
REID, WILLIAM, & COMPANY	37
ROUSE, H. B., & COMPANY *Agency:* Clifton Kirkpatrick, Chicago, Ill.	24
SILVERTONE PROCESS CORPORATION *Agency:* The Henry P. Boynton Advertising Agency, Cleveland, Ohio.	13
SKF INDUSTRIES, INC.	Inside Back Cover
STAHI NEWSPAPER SUPPLY COMPANY	3
TESCH MANUFACTURING COMPANY	38
TIMKEN ROLLER BEARING COMPANY, THE	27
TINGUE, BROWN & COMPANY	38
U.P.M.-KIDDER PRESS COMPANY, INC. *Agency:* James Thomas Chirurg Company, Boston, Mass.	30
VANDERCOOK & SONS, INC. *Agency:* Clifton Kirkpatrick, Chicago, Ill.	26
WOOD FLONG CORPORATION *Agency:* Meredith & Co., Inc., Troy, New York.	33
WOOD NEWSPAPER MACHINERY CORPORATION *Agency:* Fred Glen Small, Inc., New York, N. Y.	23

Bearings That Meet

13,000 IMPRESSIONS AN HOUR

With Smooth Flowing Ink

● SKF makes practically *all types of anti-friction bearings.* When SKF recommends a particular type of bearing, therefore, you may depend upon it: its recommendations are *unbiased!*



SKF-EQUIPPED BUILT BY U. P. M.-KIDDER PRESS CO., INC.

Thirteen thousand impressions an hour... that's what this Kidder four color rotary press demands of SKF on inking mechanisms. But that's not hard work for SKF. For SKF bearings run in giant newspaper presses that roar out from 40,000 to 65,000 impressions an hour!

This press takes the web from the mill roll and feeds it through various printing units, principally in production of waxed bread wrappers. It requires the same lower starting torque... quicker pick-up... closer adjustments, and other qualities that big presses depend upon in a bearing. And all the way through, SKF have long life. They need no adjustments. They lower maintenance. They conform to the most exacting specifications of the modern printing plant! SKF INDUSTRIES, INC., Front St. and Erie Ave., Phila., Pa.

SKF

BALL AND ROLLER BEARINGS

"I TELL YOU, CHIEF
THERE'S OUR TROUBLE